

Tasmanian Year Book



1979

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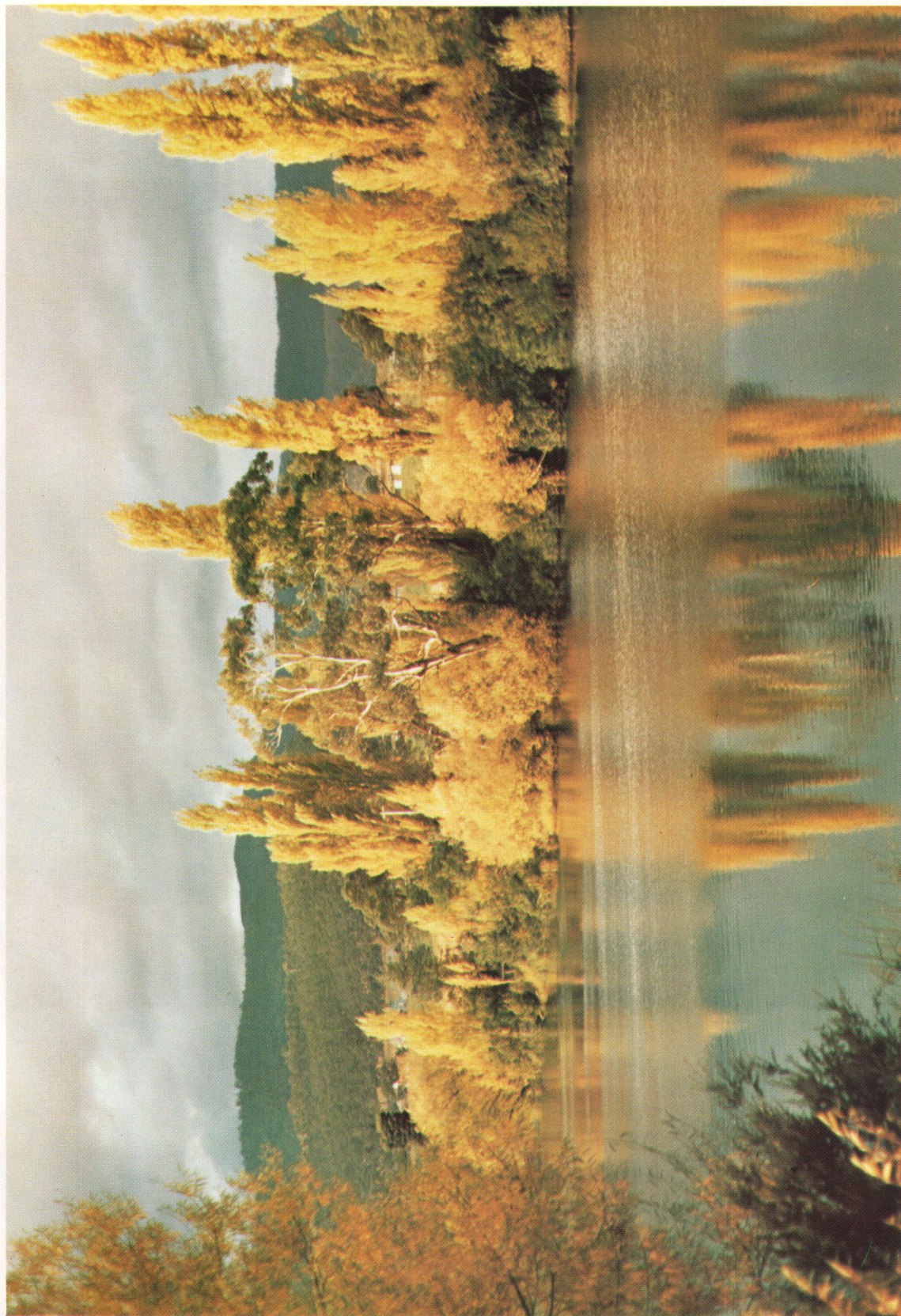
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TASMANIAN YEAR BOOK

1979



Autumn Glory

[H. M. Moore]

**AUSTRALIAN BUREAU OF STATISTICS
TASMANIAN OFFICE**



TASMANIAN YEAR BOOK

No. 13: 1979

**R. LAKIN
DEPUTY COMMONWEALTH STATISTICIAN
AND GOVERNMENT STATISTICIAN OF TASMANIA**

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SYMBOLS AND OTHER USAGES

The following symbols, where used, mean:

ASIC	Australian Standard Industrial Classification
n.a.	not available
n.e.c.	not elsewhere classified
n.e.i.	not elsewhere included
n.p.	not available for separate publication but included in totals where applicable
n.y.a.	not yet available
p	preliminary—figure or series subject to revision
r	figure or series revised since previous issue
..	not applicable
-	nil or less than half the unit shown
—	break in continuity of the series (where drawn across a column between two consecutive figures)
(H)	located in Hobart Statistical Division
(S)	located in Southern Statistical Division
(H) (S)	parts in both Divisions.

Where figures have been rounded, discrepancies may occur between sums of the component items and totals.

Where reference is made to Acts of the Federal or State Parliaments, the year quoted refers to the year in which the principal Act was passed; all subsequent amendments are inferred.

VALUES AND MEASURES

Values are shown in Australian dollars (\$) and/or cents (c). Metric units have been substituted for imperial units. The use of dollar currency and metric units has not been confined merely to tables; for the sake of uniformity, they have also been introduced into historical texts. See Appendix B for metric conversion factors.

LOCAL NAMES OF CERTAIN REGIONS

Tasmanians describe certain regions in a manner confusing to strangers; nevertheless this book employs local usage in most contexts. The chief peculiarities are:

North-West Coast: The *north* coast from approximately Port Sorell, west to Cape Grim is called the *North-West Coast*.

North-East Coast: The *north* coast from approximately Low Head, east to Cape Portland is called the *North-East Coast*. With most of the north coast referred to as either 'north-west' or 'north-east', the term 'north' is rarely applied to this coastal region.

West Coast: The Tasmanian *West Coast* may also refer only to the mining settlements of Queenstown, Rosebery, etc. In other contexts, the user may be thinking of inland mountains and rainforests rather than of a coastline.

Midlands: The true *Midlands* are probably the Central Plateau but the Tasmanian term means the rural area east of the Plateau and lying along the axis of the Hobart-Launceston road (the *Midland Highway*).

PREFACE

The *Tasmanian Year Book* is designed to present a comprehensive statistical and descriptive account of the physical environment and of the social, demographic, economic, etc. structure of the State with particular emphasis on change and development in more recent years.

This edition of the *Year Book* (the thirteenth) includes special articles on: F. M. Innes, Premier of Tasmania, 1872-1873; Renison Ltd; the Tasmanian operations of Edgell Division of Petersville Ltd; the Armed Forces Food Sciences Establishment at Scottsdale; and the Tasmanian Education Next Decade (TEND) Committee Report.

An index of special articles precedes the General Index and covers all such articles included in this previous issues of the *Year Book*.

As far as possible, the latest available statistics and significant developments which have occurred during 1978 have been embodied in each chapter.

For the first time, this edition of the *Year Book* includes a Statistical Summary. This includes details for all the more important statistical aggregates for as far back as details are available although, due to space constraints, earlier details for some series are given only for either every five or ten years.

Another innovation in this edition is the inclusion of a list of 'Further References' at the end of each chapter. These lists include not only related A.B.S. publications but also any other publications considered to be of particular relevance. Information about A.B.S. publications relating to Tasmania is also provided in the section 'Publication of Tasmanian Statistics' which precedes the Index of Special Articles. Anyone requiring advice on what statistics are available or which publications may be of most use to them is invited to contact the Information Officer (20 4495).

I gratefully acknowledge the valuable assistance given by officers of the various Federal and State Government Departments and instrumentalities and by others who have contributed information, often at considerable trouble. I am also grateful to those who have contributed photographs, in particular to Mr. H. M. Moore, a former staff member, for his selection of colour photographs. For the first time, the *Year Book* has been printed by the South Australian Government Printer and to him and his staff I express my appreciation for their assistance and enthusiasm. My thanks also go to Advance Bookbinders who were responsible for binding this volume.

The *Year Book* has been compiled under the direction of Mr. R. S. White, J.P., B.A., M.A.C.S.; Mr. D. J. Maclaine, B.A., was responsible for editing this issue.

R. LAKIN, *Deputy Commonwealth Statistician and
Government Statistician of Tasmania*

Australian Bureau of Statistics,
HOBART, February 1979

Chapter 1

HISTORY AND CHRONOLOGY

INTRODUCTION

The 1977 and earlier editions of the *Year Book* included short sections on 'Discovery' and 'Settlement'. The 1967 *Tasmanian Year Book* (the first edition) also included sections on 'The Aborigines' and 'The Convicts'. Subsequent Year Books have all included special historical articles as well as a chronology of important Tasmanian events. The table below lists historical articles appearing in all Year Books up to and including this issue. It can be seen that these articles broadly cover Tasmania's history for most of the period from discovery and first settlement up until 1873. The 'Chronology' at the end of this Chapter lists important events from the discovery of Tasmania up to the present.

Year Books: Historical Articles

Issue	Title	Pages
1967-1977	Discovery; Settlement	1-6
1967	The Aborigines	6-10
	The Convicts	10-13
1968	The Aborigines, Robinson's Journals	6, 7
	The Administration of Colonel George Arthur (1824-1836)	7-14
1969	The Administration of Sir John Franklin (1837-1843)	6-11
	The Narrative of Sir John Franklin	12-19
1970	The Land Exploration of Tasmania	6-16
	The Administration of Sir John Eardley-Wilmot (1843-1846)	16-30
	Profile of a Premier: Thomas Gregson	30-35
1971	The Van Diemen's Land Company	7-11
	The Administration of Sir William Thomas Denison (1847-1855)	11-22
	Profile of a Premier: Sir Francis Smith	22, 23
1972	The Governorships of Thomas Davey and William Sorell (1813-1817 and 1817-1824)	7-16
1973	The Parliament of Tasmania, 1823-1901	6-10
	Wybalena, The Tasmanian Aboriginal Settlement on Flinders Island	10-13
1974	Colonial Developments During the Government of Francis Smith (1857-1860)	6-16
1975	Tasmania: 1861 to 1866	6-21
1976	Sir Richard Dry: Premier of Tasmania, 1866 to 1869	6-26
1977	The Tasmanian Main Line Railway Company	6-22
	Divisions and Alignments in the Tasmanian Community During the Great War (1914-1919)	22-29
	John Glover's Migration to Tasmania	506-513
1978	Sir James Milne Wilson, Premier (1869-1872)	1-22
1979	Profile of a Premier: Frederick Maitland Innes	1-5

FREDERICK MAITLAND INNES (1816-1882): PROFILE OF A PREMIER

(This article is based on a dissertation presented towards an Honours Degree in History at the University of Tasmania by C. M. Elliot (now Mrs Sullivan) in 1963.)

Deeds, words, thoughts, probably in that order of importance, are the common means by which a man may influence his contemporaries and their affairs. A powerful orator, Frederick Maitland Innes as editor, lecturer, lay preacher, Colonial Treasurer and one-time Premier, had both the potential and opportunity to leave a lasting imprint in politics, press and society.

Early Life

Frederick Maitland Innes was born at Roxburgh, Scotland, on 11 August 1816. His father, an English Army officer, had died shortly before, and his uncle, James Innes, became the boy's legal guardian. When Innes left school he entered the office of his uncle who was a Writer to the Signet and manager of the estates of his cousin, Duke of Roxburgh. This life, lacking the adventure and apparent glamour of war, soon palled, and in 1834 Innes ran away to Spain, where England was supporting the Liberals under Isabella, against the Absolutists (led by Don Carlos, the disinherited nephew of Ferdinand VII). James Innes persuaded the Duke into demanding Frederick's return to Scotland, and the would-be soldier remained for two more years on the ducal estates. But in 1836 Innes and a friend, Captain James Reid Scott, left London on the barque, *Derwent*, arriving in Van Diemen's Land on 4 February the following year.

Journalist, 1837-1850

In 1837 Innes became a reporter for the *Hobart Town Courier*, though he later implied he was its editor. He seems to have been one of the instigators in reviving the Mechanics Institution, as an advertisement in an April 1837 edition of the *Courier* asked all those interested in founding a Tasmanian Literary and Scientific Institution to leave their names at the Courier office, and the following week Innes' signature authorised an announcement of a Mechanics Institution meeting. Through this society Innes expounded his ideas on education, especially post school education. He was peculiarly aware of the value of knowledge as he himself had had no formal instruction after leaving school.

In 1838 Innes transferred from the *Courier* to *The Tasmanian* which had formerly been incorporated in *Murray's Review*.

In that same year, 1838, Innes married Sarah Elizabeth Grey, the youngest child of Humphrey Grey, a prosperous free settler who had emigrated from Ireland in 1826. They were married at 'Roscomroe', the Grey family home near Avoca, and the bride's father promised his daughter an Evandale property then known as 'Mona Vale'. Innes resigned from *The Tasmanian* in 1839 to return to England, and his wife followed a few months later. It was generally assumed that Innes went to solicit an official colonial appointment, although his mother's illness and Captain Alexander Maconochie's proposed system of prison reform probably influenced his decision.

While in England Innes met with other prison reformers and published a comprehensive pamphlet on prison discipline. He also became Secretary to the British and Foreign Aborigines' Protection Society. Neither before nor after does he seem to have been concerned with the welfare of Tasmanian Aborigines.

In 1843, Innes and his family sailed on the *Mandarin*, arriving in Hobart Town in October. For the duration of the voyage Innes was superintendent of a group of Parkhurst boys who were being transported to Van Diemen's Land and New Zealand.

In Van Diemen's Land Innes resumed his career in journalism and again worked for the *Courier* (he may also have been the Hobart Town correspondent for the *Launceston Examiner* at this time). In 1845 he became editor of a new paper, *The Observer*, which the *Examiner* said 'rose and fell under his auspices'.¹ He moved to Launceston after resigning from the *Observer* in 1848, and joined the staff at the *Cornwall Chronicle*, where he had a short but stormy term as co-editor with D'Arcy Wentworth Murray.

About this time he also became a lay preacher with the Presbyterian Church.

Having resigned, or being forced to resign from the *Cornwall Chronicle*, Innes and his family retired to 'Mona Vale'. Renaming the property 'Woodmount', he lived there for six years in comparative obscurity.

From 1846 to 1856 Innes changed from being a competent, well-known journalist to a farmer who seems to have taken no active interest in public affairs. Innes had been appointed a J.P. and a Coroner, otherwise the retreat to 'Woodmount' seems to have been a vacuum in his life. When electorates nominated candidates for the House of Assembly in 1856, Innes was asked to stand only after several proposed nominees had withdrawn.

Politician, 1856-1882

Having accepted this somewhat dubious honour of becoming a candidate, Innes was elected unopposed to the House of Assembly as the Member for Morven. He had declined to commit himself to any particular policy, apart from a reduction in Government expenditure and increased outlay for education. He said that he would act independently because he 'knew no party in the embryo legislature'.² At the age of 40, Frederick Maitland Innes prepared to enter Parliament. Here was the opportunity to effect the theories he had expounded so willingly as a journalist.

Self-government in Tasmania began in 1856 with Innes seated on the Opposition benches, but within five months he became Tasmania's Colonial Treasurer. He remained Treasurer until November 1862, although the composition of the Ministry altered several times during that period. The *Courier* welcomed the promotion of their former sub-editor, 'During his Parliamentary career he has been distinguished for his abilities and moral courage, and if he brings the same application to bear on his new office which he has bestowed upon his Parliamentary duties, he will become a most valuable public servant'.³

Innes left his farm soon after entering politics and moved his family (seven sons and five daughters) to Hobart. In Hobart the family lived at 'Cottage Green' and then leased 'Newlands', from where the boys attended the Hobart High School (then a non-government school), while a tutor instructed the girls at home.

After entering Parliament Innes quickly accepted increased responsibilities and in 1860 provoked the following editorial in the *Hobart Town Advertiser*:

'Who is your Treasurer? F. M. Innes; who is leader of the government in the Assembly? F. M. Innes; who is the Chairman of your Education Board? F. M. Innes; who manages your Immigration matters? F. M. Innes; who is your Postmaster General? F. M. Innes; who is your "Minister" of Public Works? F. M. Innes; who is your acting Colonial Secretary? F. M. Innes.'⁴

Innes was re-elected to Morven in the 1861 elections but spoke with blithe indifference to the result of the 1862 voting, since he 'cared not one straw, for he was perfectly indifferent as any member of the House could be as to the precise elements of which the Ministry would be formed'.⁵ However, he decided not to contest the election, but to enter the Legislative Council as the Member for Campbell Town. He never gave any reason for this move, but the Ministry was very unpopular because of the continued economic distress, and his chances of winning a contested seat were slight. He may also have thought that he would strengthen the Ministry's power by entering the Council, and by some happy chance for Innes, the Campbell Town seat was vacant.

In 1862 Innes became a Commissioner of the New Norfolk Asylum, a position he held for 18 years. When Parliament reopened in June 1863, Innes was appointed to the Library Committee of the Council, a position which he held for a number of years. In 1864 he was chosen as Chairman of Committees, an important office because it was customary for the Chairman to become the next President of the Council, and Innes was elected President in 1868.

Innes continued his interest in education and was a commissioner on an inquiry into public education, a Guardian of the Queen's Asylum for Destitute Children, and an ardent supporter of the Ragged School Association; he was also instrumental in encouraging teachers from England to emigrate to Tasmania.

The Wilson Ministry resigned in November 1872 and, when others declined to form a new Administration, Governor du Cane summoned Innes, who accepted the offer after 24 hours consideration. It meant an alliance with some old enemies with whom he rarely, if ever, agreed on any issue. Consequently the Coalition was suspect from the start.

Innes became Colonial Treasurer again when he formed his own Ministry in 1872. The former Administration had fallen largely because of Innes' attacks on T. D. Chapman, the then Treasurer. Innes had accused him of misappropriating public monies, because he believed that 'the appropriation of balances or premiums from debenture funds to the current expenditure of Government is financially unsound, and especially when it is not sanctioned by Parliament'.⁶ But Innes' own financial statement was termed 'a string of well-turned sentences; vox at praeterea nihil [voice and nothing more]'.⁷ In July 1873, Innes spent two and a half hours describing the steadily deteriorating financial affairs of the Colony, but 'completely failed to impress his meaning on the House'.⁸

The Coalition lasted for less than a year. Innes tried to appease the Opposition by withdrawing all his controversial financial measures, except that of a railway rate, but this only made the fall of the Ministry inevitable. In his resignation speech Innes defended his actions on the grounds that the financial stress was not of his making. This was irrelevant. The point was that Innes had accepted office in order to relieve the stress, and had failed to do so.

The Kennerly Administration took office in August 1873 and Innes became leader of the Opposition. But in 1875 Innes crossed the floor to replace Philip Fysh as Colonial Treasurer, though Fysh still remained in the Ministry. Innes had earlier announced his intention of retiring from politics at the end of the current session, but he now told his new electorate of North Launceston that 'it must be evident to anyone who will review the composition of Parliament, the strength of parties, and the futile labours of the last two sessions, together with any chance of material changes in these respects by a dissolution, that no moderate and equitable adjustment of public difficulty is likely to be reached unless by mutual concessions, and the suspension of party rancour'.⁹ The electors were not overwhelmingly impressed, Innes won the seat by seven votes. The *Mercury* mocked, 'Mr Innes, who chilled by the cold shades of the Opposition Benches, and disheartened by the powerlessness of his position, has cruelly abandoned his helpless and hopeless followers, and leaving them without rudder or sheet anchor, has betaken himself to the more sunny shores of the Treasury benches. . .'.¹⁰

But even Innes could not save Kennerly's Ministry and, by 1876, he was once more among the Opposition while Reibey led the Government. Innes did not intend to contest the 1877 elections, but was finally persuaded to do so. He had been in ill health for some months and did not take an active part in the campaign. Unfortunately neither did his persuaders. Innes lost the North Launceston seat by 131 votes.

In September, however, Innes was sworn in as M.L.C. for South Esk and in 1878 became President of the Council. Despite constant ill health he attended every session he could. After his re-election for South Esk in 1879, he rose from his bed 'because it was his duty to assist in promoting the passage of the provisions for the public service and other necessary disbursements. He was quite aware that men who entered public life must of necessity sacrifice themselves more or less to their duties and to the promotion of the public interests . . .'.¹¹ At his death on May 11 1882, Innes was still representing South Esk and President of the Legislative Council.

Conclusion

In politics Innes never seems to have doubted his ability to guide the Colony and its finances. However, in finance, Innes had adopted a conservative approach though this was partly from his own ineptitude. The almost constant economic depression called for new constructive measures to consolidate Colonial revenue, but Innes failed to supply a remedy. There were passing references to his private finances and fitness to control those of the State and after his first Budget ('an excruciating and tormenting jumble of figures'¹²) it was said that he had 'not the ability necessary for preparing a new Tariff'.¹³ Public opinion was irrelevant, and, if anything, an impediment to good government. Colonial circumstances probably influenced him in his pessimistic conservatism, since local conditions fostered conservative rather than liberal attitudes. It is dubious whether Innes' ideas on politics and finance would have allowed him the contemporary importance and reputation he gained if he had been living in a more progressive colony such as Victoria, where the economic and political situation tended to emphasise a more liberal approach. Whether Innes had sufficient liberal tendencies to have become a leading Victorian politician is debatable, but Tasmanian conditions were conducive to conservatism.

Perhaps if Innes could have been Minister for Education rather than that of Finance, he would have been a more successful politician. Yet even his liberal and positive attitude to education failed to make him realise the inconsistency of such a policy alongside his support for a franchise based merely on a high property qualification. He does not seem to have perceived, or possibly preferred to ignore, that if education, especially at secondary and post school level, was encouraged by the State, it would not be possible to maintain intact the restricted franchise, without protest from those whom the State had educated. Innes probably never recognised, and certainly never admitted, the dilemma he faced—he, as a conservative working to preserve the status quo, and simultaneously supporting a dynamic movement—education—which must inevitably produce changes.

For all the vacillation there was some consistency. His conservatism in constitutional matters was apparent in his journalism, his liberal attitude to education did not fade. Yet his unfaltering belief in his own financial genius and political indispensability was a direct repudiation of his 1838 comment that it was 'nearly impossible that any one individual can possess exactly the right notions on its [the Colony's] various political and local interests.'¹⁴ As a journalist Innes saw events in terms of words, and continued to do so as a politician, but whereas this was an advantage in journalism and theory, it was not so helpful in practical politics. It is probable that he never discerned the difference between the theory of journalism and the practice of politics, where the words may be acted upon, and half thought out schemes attempted.

Frederick Maitland Innes, although not a great man, was a conservative liberal—intelligent but not perceptive, compromising yet undoubting of his own ability, hard working although often misunderstanding, independent and oscillating, humanitarian and self-deluding.

Footnotes

- | | |
|---|---|
| 1 <i>Launceston Examiner</i> , (24-4-1850). | 8 <i>ibid.</i> , (2-7-1873). |
| 2 <i>ibid.</i> , (9-9-1856). | 9 <i>Launceston Examiner</i> , (15-3-1875). |
| 3 <i>Hobart Town Courier</i> , (24-4-1857). | 10 <i>The Mercury</i> , (28-7-1875). |
| 4 <i>Hobart Town Advertiser</i> , (14-11-1860). | 11 <i>ibid.</i> , (24-9-1875). |
| 5 <i>The Mercury</i> , (12-10-1862). | 12 <i>ibid.</i> , (14-10-1858). |
| 6 <i>ibid.</i> , (19-8-1864). | 13 <i>ibid.</i> , (1-9-1859). |
| 7 <i>ibid.</i> , (13-12-1872). | 14 <i>Tasmanian</i> , (20-4-1838). |

CHRONOLOGY

Preface

The following chronology was originally compiled in two sections, the period 1642 to 1929 from a document specially prepared by officers of the State Archives, and the period beginning 1930 from a search of contemporary newspapers by Bureau officers. Greater detail is included in earlier editions of the *Year Book*.

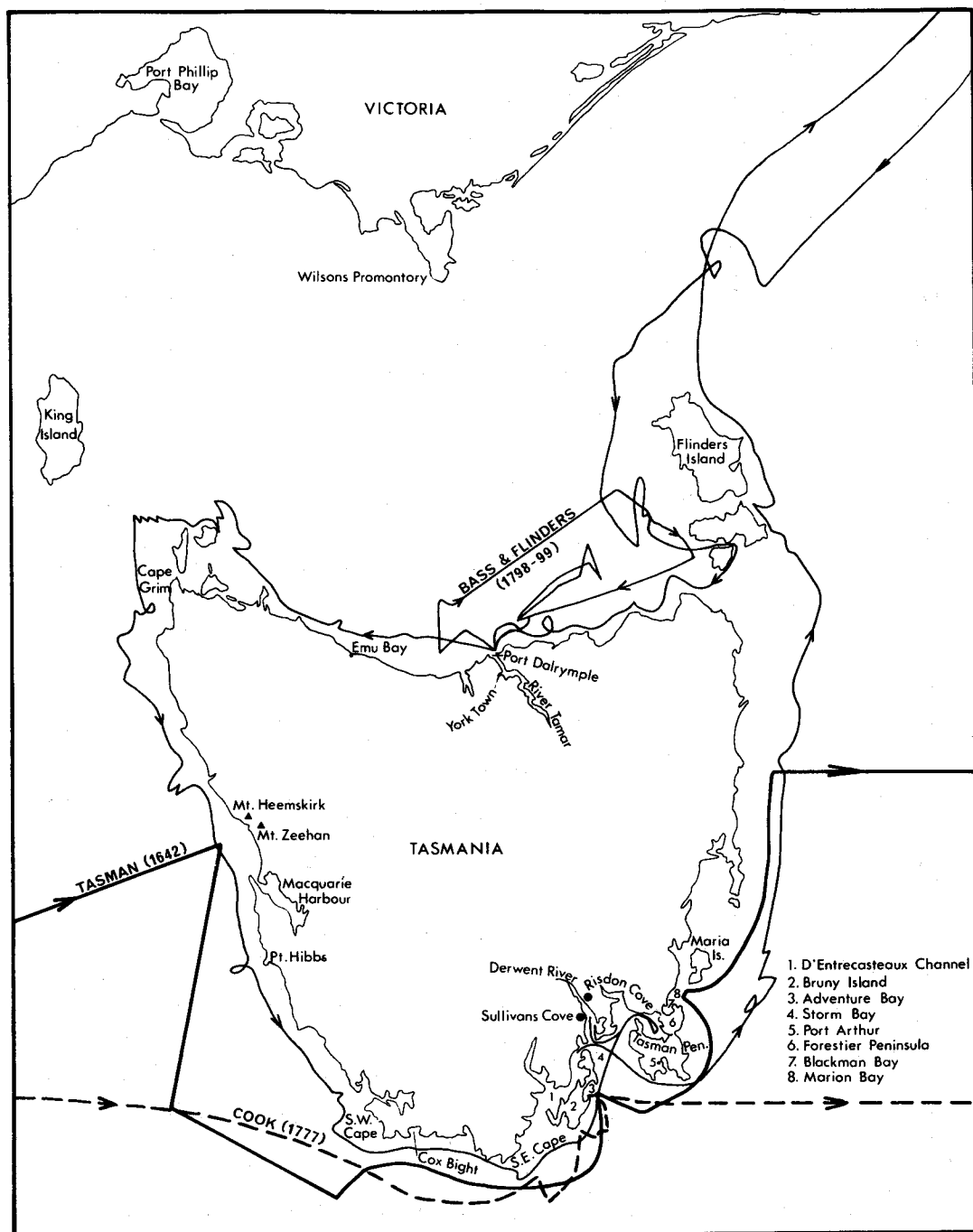
In the record of more recent years, it was found impossible to describe purely Tasmanian events in isolation since certain national events necessarily form part of the history of a state within a federal system; particularly is this true with regard to some Federal Government decisions, the state of the economy and industrial arbitration. On the other hand, there is the difficulty of deciding which events of a purely local character are sufficiently important to warrant inclusion. Some items have been introduced not because they are important but because they have a strong local flavour. This difficulty of selection is partly avoided by giving the record of the most recent years in more detail but inevitably such a policy results in matters of major and minor importance being mingled without distinction. It follows also that the second part of the chronology is limited largely to what the newspapers of the day considered important and that some events of greater significance may have escaped notice.

To round off the picture of any given year, there is a constant temptation to introduce events of world importance; as far as possible, this has been avoided except where such events had considerable local impact. In no way should the record which follows be interpreted as an 'official' chronology of the State; in actual fact, the record derives from two levels of subjective evaluation, firstly, the selection of items of importance by contemporary journalists and, secondly, the further selection of items from this narrowed field by the compilers of the chronology.

Chronology of Events from First Discovery of Tasmania

- 1642 Abel Janszoon Tasman, commanding *Heemskirk* and *Zeehan*, sighted west coast and named his discovery 'Anthony Van Diemenslandt'. Landings on Forestier Peninsula and near Blackman Bay on east coast.
- 1772 Landing of a party from Du Fresne's expedition at Marion Bay and affray with the Aborigines.
- 1773 Tobias Furneaux in the *Adventure*, became separated from James Cook in *Resolution* and landed a party at Adventure Bay.
- 1777 James Cook anchored *Resolution* in Adventure Bay on third expedition.
- 1788 William Bligh anchored *Bounty* in Adventure Bay on first breadfruit expedition.
- 1789 John Henry Cox sailed *Mercury* from Cox Bight to Maria Island.
- 1792 William Bligh, on second breadfruit voyage, anchored *Providence* in Adventure Bay. Bruny D'Entrecasteaux, commanding *La Recherche* and *L'Esperance*, discovered D'Entrecasteaux Channel and charted south-east coast.
- 1793 D'Entrecasteaux returned for further exploration of south-east coast. John Hayes, commanding *Duke of Clarence* expedition, explored Derwent River.
- 1798 Matthew Flinders and George Bass circumnavigated Tasmania.
- 1802 Nicholas Baudin, commanding *Geographe* and *Naturaliste*, explored south-east coast.
- 1803 John Bowen's party of 49 made first settlement at Risdon Cove.
- 1804 David Collins' settlement party landed at Sullivan's Cove (Hobart). Aborigines killed in an affray at Risdon. Risdon settlement closed down. William Paterson's settlement party landed at Port Dalrymple (Tamar Estuary).
- 1805 Collins forced by famine to cut rations by one-third.
- 1806 Settlers moved from York Town to Launceston area.
- 1807 Thomas Laycock's party crossed island overland from Port Dalrymple to Hobart. First Norfolk Island settlers shipped to Hobart in *Lady Nelson*.
- 1809 Governor William Bligh aboard *Porpoise* anchored in Derwent after N.S.W. mutiny and embarrassed Collins with problem of jurisdiction.
- 1810 Lieutenant-Governor Collins' death. Issue of newspaper *Derwent Star*.
- 1811 Governor Lachlan Macquarie's first visit to Tasmania.
- 1812 Lieutenant-Governor Thomas Davey arrived. Northern settlement at Port Dalrymple made subordinate to Hobart. *Indefatigable* brought first shipload of convicts direct from England.
- 1815 Hobart and Port Dalrymple declared free ports for import of goods. Davey proclaimed martial law against bushrangers. James Kelly circumnavigated island in a whaleboat.
- 1816 First issue of *Hobart Town Gazette*.
- 1817 Succession of William Sorell as Lieutenant-Governor.
- 1818 Death of Michael Howe, notorious bushranger.
- 1820 Visit by John Thomas Bigge to conduct inquiry into colonial administration.
- 1821 Second tour by Governor Macquarie.
- 1822 Penal settlement established at Macquarie Harbour.
- 1823 Passage of British Act 'for the better administration of justice in N.S.W. and Van Diemen's Land'.
- 1824 Inauguration of Supreme Court. Arrival of Lieutenant-Governor George Arthur.
- 1825 First Launceston newspaper, the *Tasmanian and Port Dalrymple Advertiser*, established. Tasmania constituted a colony independent of N.S.W. Establishment of appointed Executive and Legislative Councils. Departure of Governor Darling from Tasmania left Arthur with the authority of Governor (but not the title).
- 1826 Van Diemen's Land Co. sent first party to select land and establish farming operations. Appointment of Commissioners of Survey and Valuation.
- 1827 Lieutenant-Governor received a petition for trial by jury and some representation in Legislative Council.
- 1828 Passage of British Act 9 Geo. IV, cap. 83 which increased membership of Legislative Council. Martial law proclaimed against Aborigines.
- 1829 First settlement at Emu Bay (Burnie).
- 1830 George Augustus Robinson began his mission to conciliate the Aborigines. First use of juries in civil cases. Beginning of the 'Black Line', the military campaign to round up the Aborigines. Publication of *Quintus Servinton*, first novel to be published in Australia. Port Arthur established as a penal settlement.
- 1831 Approval of British Government's new land regulations discontinuing free grants of land, and replacing them with land sales.
- 1832 First shipment of Aborigines to Straits Islands. Establishment of the Caveat Board to settle land disputes and to confirm titles. Maria Island closed down as a penal settlement.
- 1833 Macquarie Harbour penal settlement closed down.

TASMANIA: DISCOVERY AND EXPLORATION



- 1834 Henty brothers from Launceston became first settlers in Victoria occupying land in Portland Bay area.
- 1835 John Batman sailed from Launceston to Port Phillip as agent for the Port Phillip Association. Tasmania divided into counties and parishes. Opening of Ross Bridge. Population estimated as 40 172 persons.
- 1837 Arrival of Sir John Franklin and assumption of office as Lieutenant-Governor.
- 1838 Sessions of Legislative Council opened to the public.
- 1840 Cessation of transportation to N.S.W. and consequent increase in numbers transported to Tasmania. Population estimated as 45 999 persons.
- 1841 Assignment System of convict discipline replaced by the Probation System. Rossbank Observatory for magnetic and meteorological observations established in Hobart.
- 1842 Tasmania created a separate Anglican diocese. Hobart made a city. Peak year for convict arrivals (5 329)
- 1843 Recall of Sir John Franklin and succession of Sir John Eardley-Wilmot.
- 1844 Transfer of Norfolk Island penal settlement from N.S.W. to Tasmanian control.
- 1845 Resignation of the 'Patriotic Six' members of the Legislative Council, over the drain on colonial revenue for support of Imperial police.
- 1846 Recall of Eardley-Wilmot. Foundation of the Launceston Church Grammar and The Hutchins Schools.
- 1847 Succession of Sir William Denison. The Lieutenant-Governor re-appointed the 'Patriotic Six'.
- 1848 Tasmania now the only place of transportation in the British Empire.
- 1850 Foundation of the Anti-Transportation League. Population estimated as 68 870 persons.
- 1851 British Act provided for limited representative government. First elections for 16 non-appointed members of the Legislative Council.
- 1852 First payable gold found near Fingal. Elections held for first municipal councils in Hobart and Launceston.
- 1853 Arrival of last convicts to be transported.
- 1854 Bad floods throughout Colony. Passage of bill establishing responsible government.
- 1855 Succession of Sir Henry Fox Young; title now Governor. British Government approved Constitution Bill.
- 1856 Name of Van Diemen's Land changed to Tasmania. Advent of responsible self-government. Opening of new bi-cameral Parliament with W. T. N. Champ leading first government in the House of Assembly. Re-organisation of Police Department.
- 1858 Council of Education set up. *Rural Municipalities Act* passed.
- 1859 Charles Gould appointed to make geological survey of western Tasmania, Telegraph link established with Victoria.
- 1860 Population estimated as 89 821 persons.
- 1861 Succession of Colonel Thomas Gore Browne. Telegraph cable to Victoria failed.
- 1862 Promotion of scheme for a railway between Launceston and Deloraine.
- 1864 Arrival of first successfully transported salmon and trout ova.
- 1868 Visit by Alfred, Duke of Edinburgh. Primary education made compulsory.
- 1869 Succession of Charles Du Cane. Death of William Lanny, thought to be the last male full-blood Aboriginal. Death of Sir Richard Dry. New telegraph cable laid to Victoria.
- 1870 Withdrawal of remaining Imperial troops. Population 99 328 (Census).
- 1871 Opening of Launceston-Deloraine railway. Tin discovered at Mt. Bischoff.
- 1872 Contract concluded for building Main Line Railway.
- 1873 Main Line Railway construction began. Start of economic recovery.
- 1874 Riots in Launceston in protest at rates levied for Launceston-Deloraine railway.
- 1875 Succession of Sir Frederick Weld.
- 1876 Race meetings established at Elwick. Gold nugget worth \$12 200 found at Nine Mile Spring. Death of Trugannini, thought to be last female full-blood Aboriginal. Main Line Railway opened for traffic.
- 1877 Port Arthur closed down as a penal settlement.
- 1878 Increased activity in exploration of West Coast.
- 1879 Settlement of constitutional issue known as the 'Hunt Case'. Rich lode of tin discovered at Mt. Heemskirk.
- 1880 First telephone in Tasmania with line from Hobart to Mount Nelson Signal Station.
- 1881 Succession of Sir George Strahan. Population 115 705 (Census).
- 1882 Increased prospecting on the West Coast.
- 1883 Discovery of the 'Iron Blow' at Mt Lyell.
- 1885 Russian war scare followed by activity in improvement of defences. Formation of Mt Lyell Prospecting Association.
- 1887 Succession of Sir Robert Hamilton.
- 1890 Establishment of University of Tasmania.

- 1891 Collapse of Van Diemen's Land Bank; deep economic depression.
- 1892 Mt. Lyell Mining Co. established.
- 1893 Succession of Viscount Gormanston.
- 1896 Establishment of Tattersalls Lottery by George Adams.
- 1898 Serious bush fires. Tasmanians four to one in favour of Federation at poll.
- 1899 Departure from Hobart of *Southern Cross* (Borchgrevink) expedition to Antarctic.
- 1900 Departure of Tasmanian contingent to fight in the Boer War.
- 1901 Proclamation of the Commonwealth read. Polling for first elections to Federal Senate and House of Representatives. Succession of Sir Arthur Havelock. Population 172 475 (Census).
- 1903 Celebration of 100 years' settlement cancelled because of smallpox epidemic in Launceston. Suffrage extended to women.
- 1904 Succession of Sir Gerald Strickland at reduced salary.
- 1905 Experiments in wireless telegraphy between Tasmania and the mainland.
- 1907 New Public Library opened; built with gift from Andrew Carnegie.
- 1909 Succession of Sir Harry Barron. Potato crop wiped out by Irish blight. State's first Labor Government under John Earle.
- 1912 Disastrous fire at North Lyell Mine, Queenstown.
- 1913 Succession of Sir William Ellison Macartney.
- 1914 First aeroplane flight in Tasmania. Departure of first Tasmanian contingent to fight in Great War. Formation of Hydro-Electric Department.
- 1915 Serious bushfires.
- 1917 Establishment of electrolytic zinc works at Risdon and of Snug carbide works.
- 1918 End of Great War.
- 1919 First export of frozen meat.
- 1920 Visit by Edward, Prince of Wales. Purchase of site for Cadbury's chocolate factory at Claremont.
- 1921 Population 213 780 persons (Census).
- 1922 Completion of Waddamana power station.
- 1924 First superphosphate manufactured by Electrolytic Zinc Co. at Risdon.
- 1925 Discovery of osmiridium fields at Adamsfield.
- 1927 Inquiry into proposed bridge over Derwent. Visit by Duke and Duchess of York.
- 1929 Serious floods throughout Island. Establishment of automatic telephone system in Hobart. Beginning of economic depression.
- 1930 Export prices fell to half 1928 level. Australian pound devalued so that £1 sterling equalled \$A2.50 (£A1/5s).
- 1931 Depression continued—10 per cent cut in federal basic wage. Initiation of austere Premier's Plan. Conversion loan to reduce rate of interest on internal federal debt by 22½ per cent. Census of population deferred.
- 1933 Commonwealth Grants Commission appointed to inquire into affairs of claimant states.
- 1934 Beginning of 35 years of continuous Labor Government with the election of the A. G. Ogilvie Ministry. Second phase of hydro-electric development commenced at Tarraleah and Butlers Gorge.
- 1936 Tasmania linked with Victoria by submarine telephone cable.
- 1937 Epidemic of poliomyelitis. Economic recovery evidenced by \$0.50 'prosperity' loading added to federal basic wage.
- 1938 Paper mill using native hardwoods established at Burnie. First turbines began operating at Tarraleah power station.
- 1939 Outbreak of World War II.
- 1940 Tasmanians sailed for Middle East with Australian 6th, 7th and 9th Divisions.
- 1941 Newsprint production began at Boyer on the Derwent. Tasmanians sailed for Malaya with Australian 8th Division.
- 1942 Uniform federal income tax commenced.
- 1943 The floating-arch Hobart Bridge opened for traffic.
- 1944 Pay-as-you-earn (PAYE) income taxation introduced from 1 July.
- 1945 End of World War II.
- 1946 Cessation of man-power controls. Rejection by Legislative Council of bill to grant Federal Government price control powers for three years.
- 1947 Court action to stop bank nationalisation by Federal Government. Demobilisation of forces completed. 'Displaced persons' commenced arriving from Europe. Population 257 078 (Census).
- 1948 Forty-hour week awarded to most workers from 1 January. Tasmanians voted 'No' almost two to one in referendum denying Federal Government power over prices and rents. Legislative Council's denial of Supply forced dissolution of House of Assembly—Cosgrove ministry returned to power.

- 1949 Compulsory X-ray introduced in fight against tuberculosis. Clark Dam at Butlers Gorge completed. Theatre Royal purchased by the Government. Sterling devalued by 30·5 per cent and Australian pound similarly devalued.
- 1950 End of federal petrol rationing. Dissolution of House of Assembly granted by Governor and Cosgrove ministry returned to power. Communist Party Dissolution Bill passed by Federal Parliament.
- 1951 *Communist Party Dissolution Act* declared invalid by High Court. Double Dissolution of Federal Parliament. Referendum to give Federal Government powers in regard to communism—'No' vote prevailed although Tasmanians expressed slight preference for 'Yes'.
- 1952 Single licensing authority established for hotels, clubs, etc. State's free hospital scheme ceased.
- 1953 In September, Court abandoned system of quarterly adjustment of federal basic wage. State wages boards suspended quarterly basic wage adjustments.
- 1954 Royal visit by Queen. Bill passed to resolve deadlocks in House of Assembly. Foundation of the Metropolitan Transport Trust.
- 1955 Uranium ore discovered at Mt Balfour and Royal George. Bell Bay aluminium plant officially opened. Trevallyn and Tungatinah power schemes officially opened. Anti-Communist Labor Party (later D.L.P.) formed.
- 1956 State wages boards' restoration of 'cost-of-living' adjustments effective from 1 February but these later again suspended. Sir Ronald Cross granted dissolution of House of Assembly. Labor Party returned to power in State. Official opening of E.Z. Co.'s sulphate of ammonia plant. Centenary of self-government celebrated.
- 1957 Legislative Council rejected bill giving aid to private schools. First satellites—Sputniks I and II—seen over State. Centenary of Hobart's incorporation celebrated.
- 1958 Establishment of Rivers and Waters Supply Commission. Public Service Tribunal established as an industrial authority.
- 1959 First election to fill 35 seats in House of Assembly; Labor re-elected. New Federal Government system of grants reduced claimant states to two—Tasmania and Western Australia. *Princess of Tasmania* commenced roll-on roll-off ferry service Melbourne to Devonport.
- 1960 Liapootah power station commissioned. Zeehan-Strahan railway closed. Inland Fisheries Commission created. First Tasmanian telecast. Australian 'give way to the right' rule introduced on roads.
- 1961 *William Holyman*, cargo container vessel, entered Bass Strait trade. Legislative Council rejected equal pay legislation.
- 1962 Catagunya turbines began producing electricity. State Wages Boards granted three weeks annual leave. State subsidies announced for municipal fluoridation schemes. Closure of Mt Lyell railway, Queenstown to Strahan.
- 1963 Abolition of State entertainments tax. Federal Court increased margins 10 per cent and granted three weeks annual leave. Universities Commission recommended medical school for Tasmanian University.
- 1964 T.A.A. commenced intrastate air services. Tasman Bridge opened for traffic. Hobart's water supply fluoridated. Glenorchy raised to city status.
- 1965 *Empress of Australia* sailed from Sydney on first voyage to Hobart. Provisional driving licences introduced. Dental Nurse scheme for schools announced. D'Entrecasteaux scallop beds closed for 1965 season.
- 1966 Decimal currency introduced 14 February. Burnie-Launceston co-axial cable completed. Equal pay for certain State Public Service females. Breathalyser tests approved for use by police. S.T.D. extended to Tasmania.
- 1967 Bush fire disaster of 7 February resulted in 62 deaths and over 1 000 houses destroyed. Federal Arbitration Commission abolished basic wage and substituted total wage concept but basic wage retained in State awards. Mt Cleveland tin mining town of Luina completed. H.E.C. water reserves only 16 per cent of normal; introduction of daylight saving and power rationing.
- 1968 H.E.C. Repulse Dam on lower Derwent completed. Batman Bridge across lower Tamar opened. Federal Government subsidy for apples and pears exported to U.K and other countries. Full adult suffrage for Legislative Council elections from 1 July 1969. Capital punishment abolished.
- 1969 Parangana Dam (Mersey-Forth scheme) completed. North-West General Hospital opened at Burnie. State election resulted in 17 A.L.P., 17 Liberals, one Centre Party (Mr. Lyons). Mr. Lyons combined with Liberals to form coalition government; ended 35-year Labor rule in Tasmania. Full Bench of Federal Arbitration Commission granted equal pay to females performing equal work; female salaries to be raised to male salaries in stages. Copper smelter at Mt Lyell closed; concentrate sent to Japan and Port Pirie (S.A.) for treatment.
- 1970 First pyrites railed from Rosebery to Burnie sulphuric acid plant. E.Z. Co. to establish \$6·3m residue treatment plant. Royal visit. Parliament legislated to introduce permanent daylight saving. State premiers accepted Tasmanian formula for reimbursement in lieu of receipts duty.
- 1971 \$25m A.P.P.M. Ltd. Wesley Vale paper plant opened. \$9m expansion program at Comalco (Bell Bay) completed. Serious shipping strike. Population 390 413 persons (Census).
- 1972 K. O. Lyons resigned cabinet portfolios and ended Liberal-Centre Party Coalition. A.P.P.M. Long Reach woodchip plant commenced production. A.N.L. vessel *Princess of Tasmania* made her final trip to Tasmania. Mt Lyell Mining and Railway Company Ltd fired last charge at its West Lyell Open-cut

Mine. King Island's Naracoopa rutile mine re-opened by Buka Minerals (N.L.). Federal elections—A.L.P. returned to power (after 23 years in Opposition). 300 million years old fossil of dragon fly discovered in Hellyer Gorge (west coast area).

- 1973** First train travelled the Bell Bay rail link. The first legal casino in Australia—Wrest Point—officially opened. Vote extended to 18-year-olds. The \$121m Mersey-Forth H.E.C. scheme officially opened. Storeys Creek tin mine closed down. The *Blythe Star* lost at sea while on charter to the Transport Commission. Preliminary work began on H.E.C. Pieman scheme. Tasmania voted in line with other Australian states on prices and incomes referenda—'No' to both. Alginates (Australia) Ltd. closed down its east coast seaweed harvesting and processing operation.
- 1974** B.H.P. announced \$28.5m expansion project for the Temco ferro-alloy plant at Bell Bay. Workers under State Wages Boards' awards granted four weeks annual leave. Anti-pollution regulations under the *Environment Protection Act* gazetted. Royal commission's report on urban transport advocated cessation of suburban rail services. Transport Commission's ship *Straitsman* sank in Yarra River. High Court ruled Tasmanian tobacco tax valid, but method of collection invalid. Double dissolution of Federal Parliament. Federal Labor Government re-elected. Women under State Wages Boards determinations awarded equal pay. European carp discovered in farm dams along the north-west coast. The 140 metre high Gordon Dam completed. No fault third party insurance scheme implemented. A.P.P.M. Ltd's. Burnie mill retrenched 154 workers.
- 1975** Tasmanian suburban rail services ceased. Bulk ore carrier *Lake Illawarra* rammed the Tasman Bridge, leaving a 128 metre gap and causing 12 deaths. Initial federal grant of \$13m for Tasman Bridge restoration announced. T.A.B. began operating. Transmission of colour television programs commenced in Tasmania. Electrolytic Zinc Co. announced the retrenchment of 391 employees following reductions in production. Arbitration Commission adopted wage indexation in principle. Draft Management Plan for the South-West National Park officially released. Plans released for second permanent Derwent crossing and additional land for the existing bridge. Federal Government takeover of Tasmanian railways. State Budget deficit a record \$13.6 m for 1974-75. Prime Minister dismissed by the Governor-General and the Leader of the Liberal Party appointed Caretaker Prime Minister pending a general election. Flash flooding in the southern Midlands took two lives and cut major roads and bridges. Temporary Bailey bridge crossing on the Derwent opened to traffic. \$5m Police Academy completed at Rokeby. Hotels opened for the first day of Sunday trading under new State licensing laws. Federal Liberal-Country Party Government elected with a majority in both Houses.
- 1976** Hobart recorded its highest ever maximum temperature of 40.8°C. Family Law Courts established in Tasmania to handle divorces under the *Federal Family Law Act*. Unemployment in Tasmania rose to 6.9 per cent of the work force in January (11 846 persons). Arbitration Commission granted a 6.4 per cent National Wage increase in line with indexation guidelines. Mt Lyell Co. reported record losses. 'Nimmo Report' on transport to and from Tasmania released. Investigation of a site for a second Derwent crossing began. A government-commissioned inquiry recommended the abolition of the T.C.A.E. in Hobart and expansion of the northern campus. Opening of the Tasmanian Military Tattoo attended by 4 500 spectators. A \$3.5m contract let for the provision of a fifth lane on the Tasman Bridge. A Tasmanian consortium investigated the modernisation of the Electrona carbide works, preventing an imminent shutdown. The bones of Tasmania's last full-blood Aboriginal, Truganinni, were cremated on the 100th anniversary of her death. An estimated 5 000 sheep shot and buried following low sheep prices. Mass tuberculosis X-rays phased out. Sea cargo to and from Tasmania to be subject to a freight-equalisation scheme. A.N.L. freight rates increased by 24 per cent following introduction of the direct subsidy scheme. Tasmania's budget surplus a record \$4.1m for 1975-76. State's rail freight rates increased by 15 per cent. New terminal costing \$1.6m opened at Hobart Airport. \$23.7m spent on work associated with Tasman Bridge disaster in 1975-76 and \$16m allocated for 1976-77. Unions tied up the roll-on roll-off vessel *Australian Trader* at Bell Bay following a decision to withdraw it from the Tasmanian run. Cormo sheep, a new breed developed in Tasmania, exported to the U.S.A. A new method of allocating Federal Funds to the states, in the form of a 33.6 per cent return of personal income tax collections, yielded Tasmania \$189m for 1976-77. South-West National Park doubled in size in line with South-West Management Plan proposals. State Government announced stamp duty exemptions of up to \$500 to apply to the purchase of a first home. British importers called for changes in the fruit marketing system following the arrival of poor quality apples from Tasmania. *Australian Trader* sailed on last voyage from Bell Bay. Land tax rates reduced; abolished completely on private forests. \$30m allocated for upgrading technical education facilities in Launceston. Precipitous Bluff to be included in South-West National Park following an agreement by A.P.M. to relinquish timber concessions in the area. A.P.P.M. announced plans for a \$185m expansion project at Wesley Vale but meanwhile the plant was to operate on a five-day working week. Comalco Ltd began a \$10m expansion project to increase output by 19 000 tonnes per year. Government commissioned a feasibility study on the establishment of a sugar beet industry. Tasmania experienced an 85 per cent eclipse of the sun but heavy cloud reduced its effect. U.S. nuclear aircraft carrier *Enterprise* visited Hobart for eight days. Mt Lyell Mining and Railway Co. announced plans to retrench 400 employees. First stage of the Don College at Devonport officially opened. Federal Government announced introduction of south-bound freight subsidy scheme which would apply retrospectively to cargo shipped from 1 July 1976. A 17½ per cent devaluation of the Australian dollar announced on 28 November. E.Z. Co. announced that planned expenditure to complete its pollution control programme would exceed \$12m. Total decline in jobs in the textile industry in Launceston over 2½ years reached almost 1 500. The Neilson Labor

Government returned to power with a reduced majority: A.L.P., 18 seats; Liberal, 17 seats (H. of A.). Tanker carrying 20 000 tonnes of petrol ran aground at George Town: state of emergency declared and 800 residents evacuated overnight. A.N.M. Ltd announced new plant developments which would cost approximately \$13m.

- 1977** Further 73 retrenchments at Mt Lyell brought total to nearly 300 since November 1976. Tasmania admitted to the Sheffield Shield on trial basis for next two seasons. Business syndicate announced plans for a \$3m holiday resort complex to be built at Great Lake. Joy Report on Tasmanian Railways recommended cutbacks in services, freight rate rises and a complete review in 1981. Two men killed in Fingal coal mine explosion. Air Tasmania applied to Federal Government for permission to buy an aircraft for a freight service between Hobart-Melbourne-Sydney. \$1.3m expansion program announced for Stanley Works, Hobart. Two-day visit to Hobart and Launceston by Queen Elizabeth and Prince Philip. Federal Government confirmed Kingston as the site for Australia's new Antarctic Base. State Government announced plans to form a commercial film-making corporation. Ida Bay Railway re-opened by commercial interests. \$1.3m Eastern Shore Community Health Centre opened. Second Tasmanian Military Tattoo realised 33% increase in attendance. Federal Government was asked to purchase Kelsall and Kemp Woollen Mill which subsequently retrenched 234 workers. State Strategy Plan released. Boags Esk Brewery undertook \$2m expansion at Launceston plant. Mt Lyell Company and Getty Oil announced plans for \$5m five-year exploration program on west coast. T.C.A.E. F. M. radio began regular transmission. \$25m expansion program announced by A.P.P.M. Burnie. 140 km/h winds caused damage in Hobart. Joint Australian-Korean company planned new fishing and fish processing industry on the east coast. Federal referenda accepted three proposals but rejected simultaneous elections, Tasmania, W.A. and Queensland combining to defeat that proposal. Australian National Railways Commission leased part of Hobart Railway marshalling yards to State Government enabling construction of a slip road by-passing the Railway Roundabout. Arbitration Commission handed down the March quarter National Wage decision of 1.9 per cent increase up to \$200 per week and a flat \$3.80 thereafter. 'Price freeze' officially ended. Second Ranger uranium inquiry (Fox) report released. State Government purchased Jones and Co. warehouse for \$1.62m, to be used as a site for light industry. Secretary of T.T.L.C., Mr. R. J. Watling and Minutes Secretary, Mr P. A. Imlach charged with being members of, or connected with, the National Civic Council. One km long and 5 x 5 m Gordon Dam tailrace tunnel holed through. G. J. Coles submitted plans for \$7m K-Mart at Devonport. Report on education in Tasmania recommended: greater emphasis on community involvement; reduction of educational inequalities resulting from social origins; abolition of corporal punishment; assistance in rural areas; and strengthening the district school system. Full Bench of the High Court dismissed the appeal against mining of limestone at Precipitous Bluff. Supreme Court ruled that laws proclaimed by regulation (published in State Gazette) are not valid. 74 Vietnamese refugees allowed to settle in Tasmania. State Department of Planning and Development established. Full Bench of Supreme Court reversed earlier decision regarding invalidity of regulations published in the State Gazette; Lower Courts returned to normal. Retail Traders Association attempted to restrict Saturday afternoon and Sunday trading. Comalco Aluminium (Bell Bay) Ltd began an expansion program to lift output by 20 per cent. State Government finished financial year with \$1.6m surplus in the Consolidated Revenue Fund. Plans approved for pedestrian mall in the centre of Hobart. South-bound freight subsidy to benefit the State by \$20m for the financial year 1976-77. Edgell Division of Petersville Australia Ltd, to spend \$2.1m expanding their potato processing plant, increasing production capacity by 50 per cent. Radar guns introduced for use by the Police. Coats Patons Ltd, announced \$1.7m development program. Industries Assistance Commission recommended tariff cuts for clothing, textile and footwear industries. Federal grants to Tasmanian local government authorities totalled \$5.3m, an increase of \$1.3m over the previous year. Fire caused \$2m damage at Lactos Pty Ltd's, Burnie cheese factory. Military Tattoo cancelled for 1978; State Government announced plans to take over 1979 Tattoo. Cox Inquiry into Fire Brigades Commission recommended establishment of a Fire Protection Authority headed by an administrator to replace the existing Board. Messrs R. J. Watling and P. A. Imlach expelled from the A.L.P. The Premier, Mr Neilson, announced his retirement from 1 December to become Tasmania's Agent-General in London. Report of Callaghan inquiry into Tasmania tabled. First year motor cycle riders to be limited to cycles of 250 c.c. or less. Federal Parliamentary Public Works Committee recommended relocation of Antarctic Division at Kingston at a cost of \$8m. Devonport ratepayers rejected site value rating. Japanese-Australian survey of squid resources in south-east Australian waters announced. A \$121m expansion, increasing plant capacity by 93 000 tonnes, opened at Comalco Aluminium (Bell Bay) Ltd. Legislative Council Select Committee report on the Ambulance Commission recommended its abolition and replacement by a Transport Division within the Department of Health. Legislation introduced to establish a State Fire Authority. Auditor-General critical of financial operations of 1977 Military Tattoo. Mr Baldock, Minister for Main Roads, announced that the Bailey Bridge would be retained for light vehicles and buses after the re-opening of the Tasman Bridge. Tasman Bridge re-opened 8 October (closed since 5 January 1975); Federal Government payments for restoration, widening and provision of new and up-graded roads, provision of services on the Eastern Shore and assistance to ferries totalled \$44m. The first 144 000 kW generator commissioned at Gordon River power station. Plans announced for Hobart's West End shopping mall and car park complex (three-level, covered shopping arcade and five-level car park (capacity 535)); the venture to be jointly financed by National Mutual Life Association (\$3.7m) and Hobart City Council (\$3.3m). Jetfoil feasibility study presented to members of State Cabinet. Federal-State tax sharing arrangements finalised; states to share 39.87 per cent of personal income tax collections from the preceding year. Australia's first housing advisory service opened in Hobart for a trial period of one year.

Carbide Industries Pty Ltd, announced \$5.5m re-development plan for its Electrona works. Arbitration Commission granted agricultural workers a 40-hour week plus four weeks annual leave. State Government announced a scheme to provide free conveyancing to first home buyers up to \$50 000 value. Plans announced for \$3m convention centre in Launceston to be connected to the Albert Hall. Board of Inquiry established to examine as one of its terms of reference, the effects on the Tasmanian economy of probate reforms in other states. Estates passing between husband and wife in Tasmania to be exempted from death tax. A.P.P.M. Burnie announced two-year expansion program creating 100 jobs and increasing capacity by 25 000 tonnes at a cost of \$30m. Prince Charles visited Hobart. Frosts caused estimated \$5m loss to Tasmanian fruit industry. The Federal Government announced a ten-point plan for the growth and development of Tasmania based on the Callaghan Report. Federal Government agreed to pay \$4.46m to aid Mt Lyell to the end of 1977-78 financial year as a result of I.A.C. report recommending special assistance to the Company; the cost to the State Government was \$337 000 in pay-roll tax concessions. Launceston Transport Revision Report recommended the spending of \$25m to upgrade Launceston's road system over the next 10 years. The State Government announced intended purchase of the Kellsall and Kemp site, Launceston for conversion to a precision tool annexe for the railways. Mr G. F. Paltridge appointed chief administrator of the new State Fire Authority. Esso Corporation granted licence for uranium and precious metals prospecting in the Rossarden area. The Prime Minister, Mr Fraser, announced that the Federal Government was committed to the construction of a second bridge for Hobart. Timber salvage operations commenced in the Pieman River area which was to be flooded due to hydro-electric development. Mr Lowe replaced Mr Neilson as Premier following the latter's resignation. The Liberal-N.C.P., coalition returned to office with a substantial majority following the 10 December Federal election; in Tasmania, all five House of Representative seats retained by the Liberals who filled three of the five seats in the half-Senate elections. Mr W. McKinnon (A.L.P.) elected in by-election for the House of Assembly (Franklin). Tasmania defeated India in a four-day cricket match at the T.C.A. Drought conditions in many parts of the State the worst for 30 years. Forecast suggested that only one half of the State's apple crop would remain packable due to frost and hail damage. 112 people died on Tasmanian roads for the year. Tasmania's registered unemployed at the end of December reached a post-war record level of 7.18 per cent or 12 621 people; the national average was 6.5 per cent of the work force.

1978 See Appendix following Chapter 18

Chapter 2

PHYSICAL ENVIRONMENT

GENERAL DESCRIPTION

Location and Area

The State of Tasmania is a group of islands lying south of the south-east corner of the Australian mainland; the major island is Tasmania and the more important of the lesser islands are King, Flinders and Bruny. Roughly shield shaped with the greatest breadth in the north, the Tasmanian mainland extends from 40° 38' (the official northern boundary of Tasmania is 39° 12') to 43° 39' south latitude and from 144° 36' to 148° 23' east longitude. The coastline is bounded by the Southern Ocean on the south and west and the Tasman Sea on the east, while the approximately 240 kilometres wide Bass Strait separates the island from the Australian mainland. Macquarie Island, a part of the State, is situated at 54° 38' south latitude, 158° 53' east longitude and is bounded by the Southern Ocean.

The area of the whole State, including the lesser islands, is 68 300 square kilometres or about 0.9 per cent of the total area of Australia (7 686 900 square kilometres); it is just under one-third the size of Victoria, the smallest mainland state, and is less than half the size of England and Wales.

Mainland Australia, extending as it does well north of the Tropic of Capricorn, and with much of its area in the zone of the sub-tropical anti-cyclones, is basically a warm, dry continent. Tasmania is in the temperate zone and practically the whole island is well watered with no marked seasonal concentration; there are no deserts or drought areas as found extensively on the adjacent continent. Being south of latitude 40°, it is on the edge of the wind belt commonly known as the *Roaring Forties* and, with South America the nearest land mass to the west, Tasmania's weather is subject at times to strong winds and heavy rain about the south and west coastal areas. Because Tasmania is the most southern state, there is a tendency to think of it as being close to the Antarctic but its latitude is matched, in the northern hemisphere, by that of Madrid (Spain) and Pittsburgh (U.S.A.). In addition, as Tasmania is an island, it is sheltered from the extremes of heat and cold experienced in these two centres. The effect of its insular position is illustrated by the variation between summer and winter mean temperatures in coastal towns—this rarely exceeds 8° Celsius. Comparing Hobart (Tasmania) with Melbourne (Victoria), mean maxima are some 3°C warmer and mean minima 1.5°C warmer in the Victorian capital.

Apart from the Great Dividing Range in the east, continental Australia is predominantly a land of low plateaux and plains with little relief. By way of contrast, Tasmania could legitimately be called the island of mountains, since it has the largest proportion of high country to its total area, compared with the other states. The distinctive feature of the island is not so much the height of the mountains—few exceed 1 500 metres—but rather the frequency with which they occur. The *Australian Pilot*, Vol. II describes Tasmania as 'probably the most thoroughly mountainous island on the globe'.

Population Distribution

With a population of only 410 600 (at 30 June 1977), Tasmania is still thinly populated although its population density of only six persons per square kilometre is exceeded only by Victoria and New South Wales among the Australian states. By comparison, the population density of England and Wales at 30 June 1976 was 326 persons per square kilometre (area 151 140 square kilometres; population 49.2 million). To have this population density, Tasmania (area 68 300 square kilometres) would require a population of 22.3 million.

A marked characteristic of the mainland states of Australia is the very high concentration of population in their respective metropolitan areas, Brisbane providing the only example where this concentration falls below 50 per cent of the State's total population. In contrast, the Tasmanian population is concentrated in three main areas: (i) the Hobart Statistical Division with about 40 per cent; (ii) the Launceston Statistical District with about 20 per cent; and (iii) the North Western Statistical Sub-division with a further 22 per cent. Only 75 per cent of Tasmania's population live in urban centres (localities with 1 000 or more persons); all other states are in the range from 80 to 90 per cent. This deviation from an Australian pattern is partly explained by the relative proximity of Launceston and the North-West Coast to the principal mainland markets. However, terrain and climate have also had a large influence on the distribution of the State's population.

Principal Physical Features

The following table lists the principal mountains, lakes and rivers of Tasmania (for their location see the previous map):

Principal Physical Features

Mountains			
Name	Height (metres)	Name	Height (metres)
Mt Ossa	1 617	Stacks Bluff	1 527
Legges Tor	1 573	Mt Gould	1 491
Barn Bluff	1 559	Mt Jerusalem	1 458
Mt Pelion West	1 554	Frenchmans Cap	1 443
Cradle Mountain	1 545	Mt Anne	1 417

Lakes			
Name	Area (square kilometres)	Name	Area (square kilometres)
Lake Gordon (a)	272	Lake King William (a)	41
Lake Pedder (b)	241	Lake Echo (c)	41
Great Lake (c)	158	Lake St Clair (c)	28
Arthurs Lake (c)	64	Lake Augusta (c)	12

Rivers			
Name	Length (kilometres)	Name	Length (kilometres)
South Esk (d)	201	Huon	170
Gordon	185	Arthur	113
Derwent	182	Pieman	98

(a) Man-made.

(b) Man-made—inundated the much smaller natural Lake Pedder.

(c) Natural lake enlarged by dam(s).

(d) From source to confluence with North Esk; at this point the river becomes known as the Tamar. If the Tamar is included in the length of the South Esk a further 70 km is added to its length.

PHYSIOGRAPHY

Introduction

Tasmania is an island of mountains and is unique among Australian states in being predominantly influenced by polar maritime air masses. From the point of view of settlement and development, these two factors have combined to create assets against which must be weighed certain liabilities. The island, a mere 296 kilometres from north to south and 315 kilometres from east to west, has a wide variety of mountains, plateaux and plains, of rivers lakes and tarns, of forest, moorland and grassland, of towns, farms and uninhabited (and virtually unexplored) country. The temperate maritime climate partly explains Tasmania being called the most English of all states but other factors operate to heighten the comparison—the pattern of agricultural settlement with orchards, hedges and hopfields; the

lake country; the early freestone architecture still common in the east; the roads and villages dotted with oaks, elms and poplars. Nature and the early settlers have provided the assets for a flourishing tourist industry which is currently being vigorously developed. Assured rainfall and mountain storages have also given birth to massive development of hydro-electric power and, indirectly, to industry. The growth of forests, too, is promoted by suitable rainfall and temperature, and this forms the basis for industries such as timber-milling, newsprint and other paper production and wood-chipping.

The mountainous nature of the island is confirmed by surveys, which shows six features exceeding 1 500 metres, 28 exceeding 1 220 metres and a further 28 exceeding 915 metres. The highest mountain is Mt Ossa (1 617 metres) some 16 kilometres north-west of Lake St Clair, and north-west again from this peak lie Mt Pelion West (1 554 metres), Barn Bluff (1 559 metres) and Cradle Mountain (1 545 metres); the furthest distance, 24 kilometres, is from Mt Ossa to Cradle Mountain. In the Ben Lomond area, the principal features are Legges Tor (1 573 metres) and about 10 kilometres south, Stacks Bluff (1 527 metres). Each of these mountainous regions and a number of others have been set aside as national parks, two of which, Ben Lomond and Mt Field, are renowned for winter sport.

Water Resources and Rainfall

Fresh-water navigation has played very little part in Tasmania's development, the rivers being too fast-running, shallow or short. Of the four major ports, three are located on tidal estuaries—Hobart on the Derwent; Launceston on the Tamar and Devonport on the Mersey (Burnie has built a port on the open sea, protected by breakwaters). Rivers, however, are significant for three reasons: (i) use of headwaters for electricity generation; (ii) domestic and industrial water supply; and (iii) irrigation. Hobart, for example, draws much of its water supply direct from the upper Derwent River without use of a dam and the river flow is adequate to service a population at least 10 times greater than that at present. The development of hydro-electric power has been based on full utilisation of the sources and tributaries of the Derwent with a chain of power houses stretching from Clark Dam on Lake King William to Meadowbank only 51 kilometres from Hobart. The naturally southward draining Great Lake waters are diverted northwards through the Poatina power station and discharged into the South Esk River system. The waters of the South Esk have been further harnessed at Trevallyn. In the north-west, the Mersey-Forth scheme exploits the Fisher, Mersey, Wilmot and Forth Rivers in a development spread over approximately 2 070 square kilometres. Stage I of the Gordon River power development scheme in the south-west was completed in 1978, creating the largest fresh-water storage in Australia. This does not exhaust the possibility of future hydro-electric development, as construction work on the Pieman River system has commenced with completion scheduled for 1986, and the Lower Gordon, Franklin and King Rivers are also considered to have substantial potential for power development.

To obtain a true perspective, it should be appreciated that large areas of the State cannot be cultivated because there is too much rainfall (in contrast with the mainland of Australia where often the reverse situation applies). Further, the mountainous terrain and accompanying highland climate have restricted farming to relatively small areas of suitable country, mainly river valleys, coastal plains and the lower plateaux. In 1977, farm statistics showed that 34 per cent of the State's area was occupied by rural holdings. Only 2.8 per cent of the area of rural holdings was under crop and a further 39.1 per cent under sown pasture. The remaining 58.1 per cent of rural holdings included bush runs, uncleared scrub or possibly land unsuitable for any rural purpose at all. A high proportion of the State's area not included in rural holdings is composed of forests, national parks and lakes.

Physiographic Regions

To explain the pattern of settlement, it is necessary to isolate the various physiographic regions of the State as follows:

Central Plateau: The main feature is a relatively undissected, dolerite-capped plateau sloping generally south-eastward from an average level of 1 065 metres in the north to 610 metres in the south, and drained almost wholly by the Derwent system. The northern and eastern boundaries of the Plateau are the Great Western Tiers (paradoxically named since they lie in the central north of the island). This is known as the 'lake country' of the island and is the chief source of hydro-electric power.

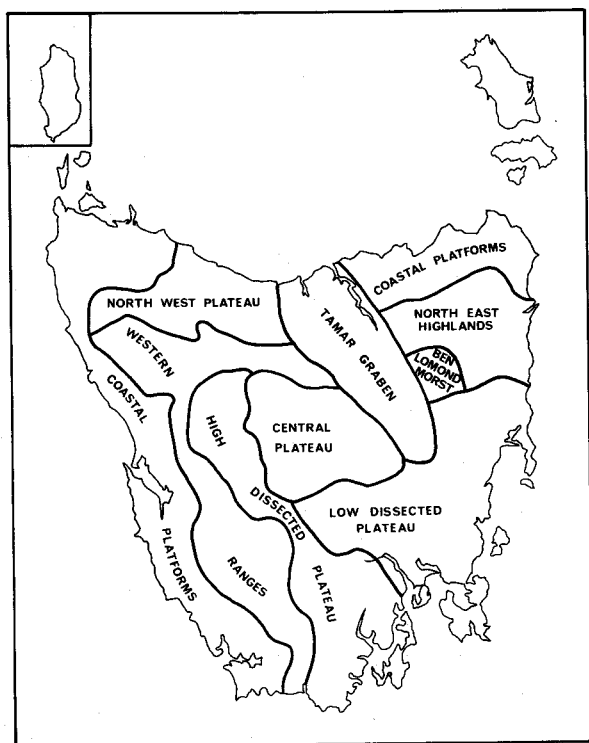
High Dissected Plateau: West of Lake St Clair, dolerite caps steeply-tilted sediments and the plateau is much dissected; it comprises a series of peaks and broken ridges. The coastlands in the extreme south of the region are rugged but in the D'Entrecasteaux Channel and Huon River areas, narrow coastal belts have been devoted to specialised agriculture.

Western Ranges: The high dissected plateau is bounded by a mountainous series of ranges running parallel to the west coast and in this region are located the State's principal mines. The south of the region is virtually uninhabited except for construction workers on the Gordon power scheme.

Western Coastal Platforms: Throughout almost the entire length of the west coast, an uplifted and much dissected peneplain slopes westward from about 275 metres altitude, ending abruptly in cliffs more than 30 metres high. In the south of this region, superhumid button grass plains predominate, and the area is uninhabited. On the coastal plain south of the Arthur River, however, dairy cattle are wintered on agistment runs, while north of the river dairying begins to appear and swamps formed by recent emergence have been cleared for farming.

North-West Plateau: North of the Western Ranges lies a plateau averaging nearly 610 metres altitude and important mainly for forestry; the coastlands derive mainly from basalt, giving rise to intensive mixed farming based on dairying, potatoes and crops for canning and freezing, such as peas and beans.

Tasmania Physiographic Regions



The above regions derive from a classification by J. L. Davies, M.A., PhD., University of Tasmania.



Entally

[H. M. Moore]

Beaufront

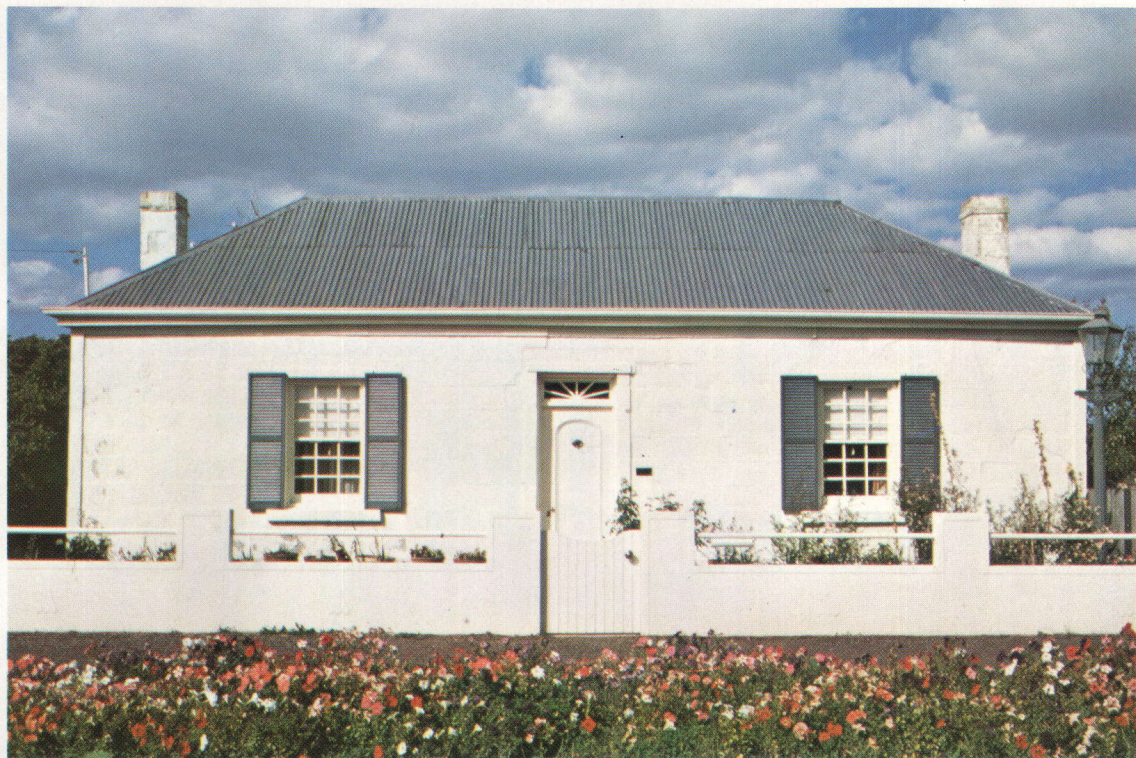




Ivylawn

[H. M. Moore]

Ross



Tamar Graben: This graben (rift valley) is the largest plain and the leading agricultural and pastoral district in the State; it ends in the drowned inlets of the Tamar and Mersey estuaries and of Port Sorell, in the north.

North-East Coastal Platforms: This region consists of undulating lowland but the soils are acidic and the land is used only for grazing.

North-East Highlands and Ben Lomond Horst: This region comprises mostly uplifted remnants of old fold mountains dominated by the 1 525 metre dolerite-capped plateau horst of Ben Lomond, an outlier of the Central Plateau. Here agriculture is largely confined to small basalt-derived basins. Some minerals are worked.

Low Dissected Plateau: In the south-east lies a low dissected dolerite plateau averaging perhaps 365 metres and used mainly for grazing. The northern coastlands of this region are narrow and also devoted to sheep, but the southern coastland is important for its specialised agriculture. At the extreme south of the region is the drowned estuary of the Derwent and the Tasman and Forestier Peninsulas.

DESCRIPTION OF STATISTICAL DIVISIONS

Introduction

Earlier in this chapter the State of Tasmania was briefly described by analysing its terrain in terms of physiographic regions. For statistical purposes, the State is also analysed in divisions but these do not necessarily coincide with physiographic regions, one reason being that the former are basically groupings of whole municipalities. The traditional Tasmanian statistical divisions, in use for over 50 years, were exposed to searching scrutiny in 1971 and the decision was taken to introduce a new structure, to be applied to statistics in respect of periods commencing on or after 1 July 1972.

History of Statistical Divisions

The grouping of administrative areas into divisions for statistical purposes can be found in annual volumes of the *Statistics of Tasmania* dating back to the nineteenth century. The administrative areas included: police districts; registration districts; electoral districts; and municipalities. The boundaries of these areas were subject to periodic changes. The *Local Government Act 1906* provided a basis for the whole State coming under uniformly constituted local government and gradually the divisional grouping of administrative areas was confined, in official statistics, to municipalities. As a result of this Act, fixed local government area (municipality) boundaries were delineated in 1907 by a commission specially set up for the purpose. The new boundaries have remained broadly unchanged since 1907 although there have been numerous relatively minor boundary changes. One exception is that the old municipalities of 'Hobart', 'Queenborough' and 'New Town' were combined to form the new municipality of 'Hobart' in 1919. The names of several municipalities have also been changed since 1907. Small area statistics relating to 1907 and earlier years are not generally comparable with later statistics produced by the Bureau due to the boundary changes in 1907.

In 1919, groupings of local government areas used were very similar to those still used in 1971; in some series Hobart, Launceston and Glenorchy were separately specified as components of an 'Urban Division' distinct from the region in which each was located.

The basis for these 1919 groupings can only be inferred since no specific criteria were specified in the records. The Western Division clearly combined the 'west coast' mining municipalities into one entity; the Southern Division seemed to be based on orcharding, small fruit and hop areas; while the South Eastern Division was allied more with pastoral and grazing areas. In short, the main determinant may well have been similarity of rural activity (with the Western Division a special case because of its mining activity).

After the 1966 population census, a new division was formed with the title Hobart Division, comparable with similar capital city divisions in other states; its boundaries were drawn wide enough to encompass the expected expansion of the inner urban area for a period of 20 to 30 years. Apart from this, the broad divisional structure in 1971 was very much the same as it had been in 1919.

In 1972 a new statistical division structure, using the three principal urban centres of influence as a basis, was designed. The three urban centres and their areas of influence were: (i) Hobart—south and south-east; (ii) Launceston—north and north-east; and (iii) Burnie—

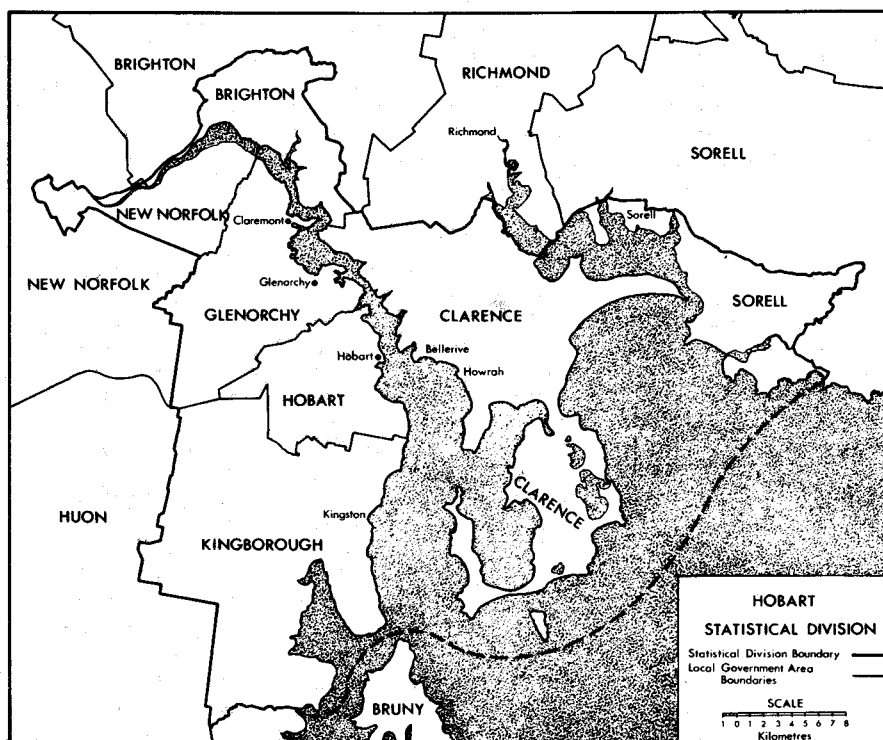
Devonport—north-west and west. The following divisional structure was then adopted: (i) with Hobart as focus—Hobart and Southern Divisions; (ii) with Launceston as focus—Northern Division split into Tamar and North Eastern Subdivisions; and (iii) with Burnie-Devonport as focus—Mersey-Lyell Division split into North Western and Western Sub-divisions.

Outline of the Present Structure

The divisions in the new structure are as follows:

Hobart Division

This Division comprises Hobart and Glenorchy Cities, the municipality of Clarence, and parts of four other municipalities: Brighton; Kingborough; New Norfolk; and Sorell. The Division is Tasmania's principal industrial region and the administrative focal point. The Hobart Division boundaries were drawn wide enough to contain the expected outward growth of the inner urban area for a period of 20 to 30 years.



One important component of the Hobart Division is Urban Hobart, defined as the densely settled contiguous parts of the cities of Hobart and Glenorchy, and of the municipalities of Clarence and Kingborough. The boundaries of Urban Hobart and of the Hobart Division do not conform with borders defining local government areas. (The details of these boundaries are given in Chapter 6 'Demography' under 'Population Centred on Hobart'.)

Southern Division

Comprises the southern local government authority areas which have Hobart as their urban focus. Predominant activities include orcharding, sheep and cattle grazing, forestry and timber processing.

Northern Division

The Northern Division is the region with Launceston as its urban focus.

(i) *Tamar Sub-division*: This is the region dominated by the Tamar Valley. In the centre of this area is Launceston and its suburbs (known as Urban Launceston). This Sub-division includes several major manufacturing industries, port facilities of the northern region and agricultural, pastoral, dairying and forestry industries.

Launceston Statistical District: A new boundary delineating the Launceston Statistical District was drawn for the purpose of presenting results of the 1976 Population Census. The boundary was drawn to contain the area of expected urban growth over the next two decades and includes the City of Launceston and parts of seven other municipalities.

Urban Launceston is defined for statistical purposes as the City of Launceston plus the contiguous urban parts of the following municipalities: Lilydale, St Leonards, Evandale, Westbury and Beaconsfield.

(ii) *North Eastern Sub-division*: Comprises the outer seven municipalities of the Northern Division. Principal activities include agriculture, dairying, sheep and cattle grazing, forestry and some mining.

Mersey-Lyell Division

This division encompasses the north-west and western portions of the State. The region has a twin urban focus of Burnie-Devonport.

(i) *North Western Sub-division*: Comprises the municipalities stretching along Bass Strait from Latrobe to Circular Head plus Kentish and King Island. The Sub-division includes several major manufacturing industries and is a principal agricultural, pastoral, dairying and forestry area for the State.

(ii) *Western Sub-division*: Contains Tasmania's western municipalities where mining activities predominate.

The accompanying maps show: (i) Statistical division and sub-division boundaries; (ii) local government authority components of statistical divisions; and (iii) the boundary of the Launceston Statistical District.

ADMINISTRATION AND AREA OF STATE**Sovereignty**

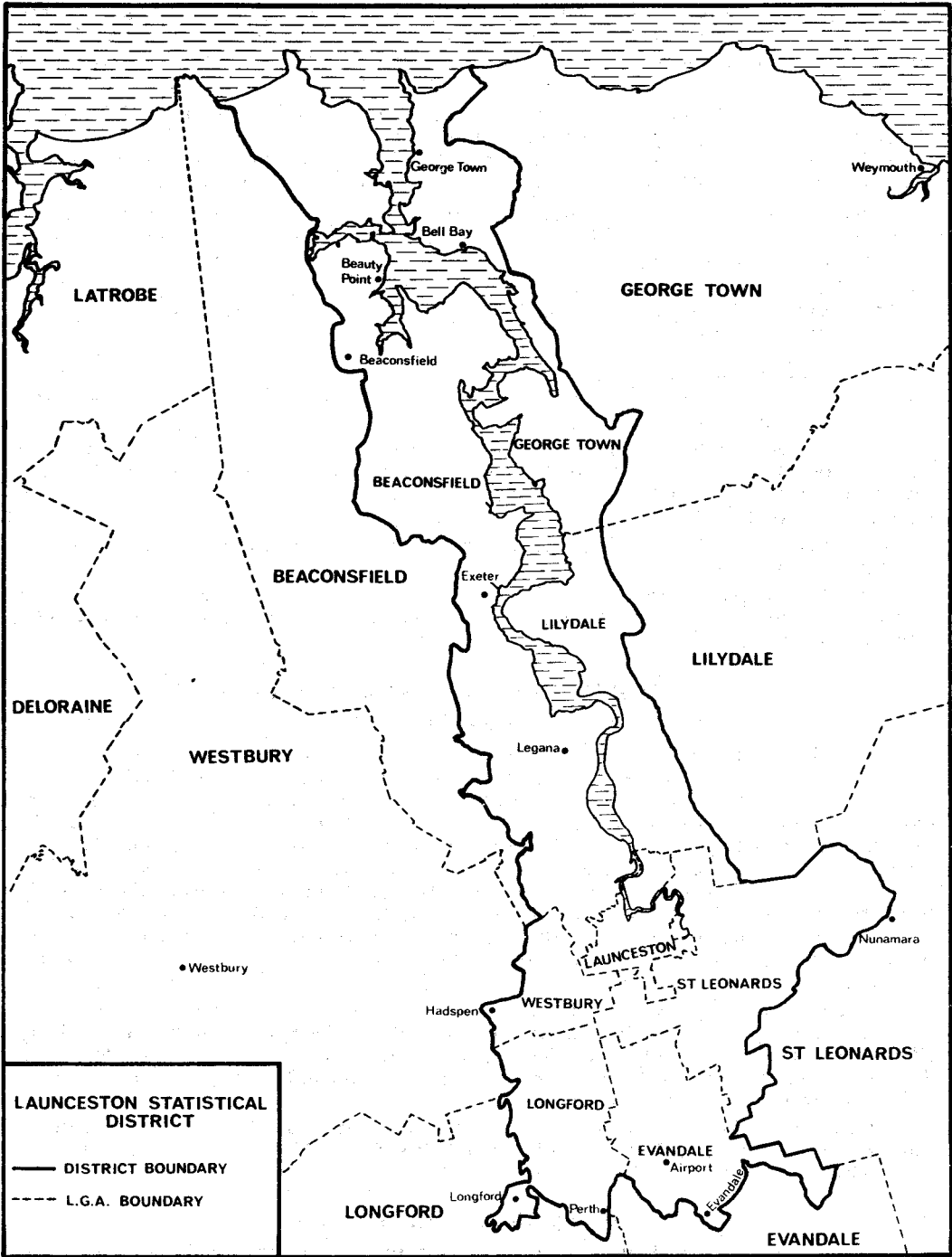
On 17 December 1975, the High Court of Australia announced its decision on an action by the six states challenging the validity of the federal *Seas and Submerged Lands Act*. This Act gives the Federal Government sovereignty over the Australian territorial sea, air space, sea-bed and subsoil; and over the continental shelf beyond the limits of the territorial sea. In their action, the state governments claimed that the sovereign powers given the states over their land mass included sovereignty over the territorial sea adjacent to their coastlines for a distance of at least 3 miles (4.8 km). The full bench of the High Court dismissed the action by the states and upheld the validity of the *Seas and Submerged Lands Act*. Prior to this decision, Tasmania had claimed sovereignty (including mining and fisheries jurisdiction) over an area bound by the approximate rectangle 39° 12' to 45° south latitude and 140° to 150° east longitude.

Since the boundary line between Tasmanian and Victorian sovereignty is defined as 39° 12' south latitude, numerous Bass Strait Islands, the chief being the Furneaux group, King Island and the Hogan, Curtis and Kent groups, are part of Tasmania. In effect some Tasmanian territory (Rodondo and West Moncoeur Islands) is located only 13 to 16 kilometres from the Victorian coast.

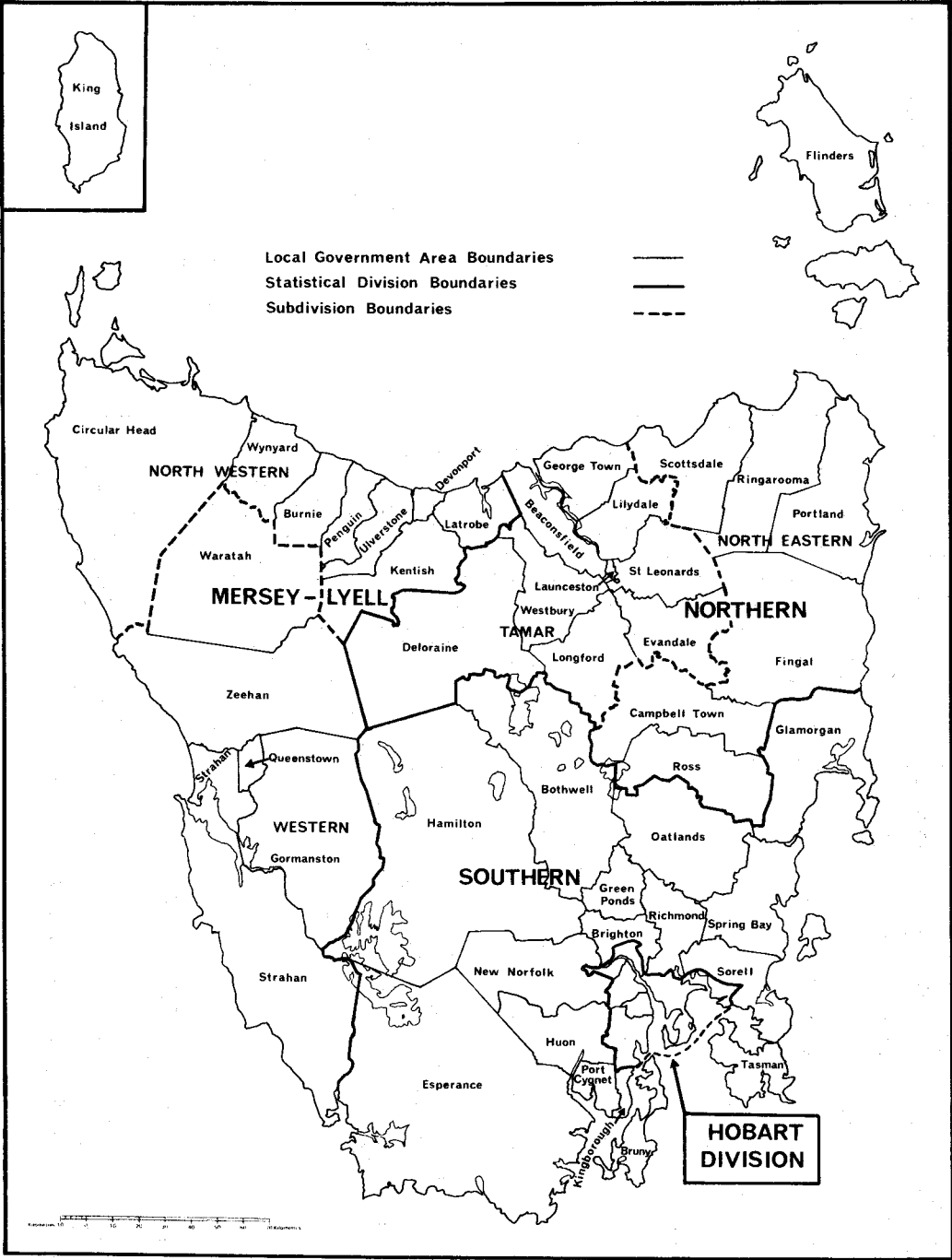
Macquarie Island, site of an Antarctic research station, is also part of the State of Tasmania and is situated in 54° 38' south latitude, 158° 53' east longitude; its area is included in Esperance, a State coastal municipality.

Area of Major and Minor Islands

The official area of the State of Tasmania including many smaller islands (based on a 1963 survey) is 68 331 square kilometres (6 833 100 hectares). The following table shows the area of the main islands and the municipalities to which they belong:



Tasmania: Local Government Areas and Statistical Divisions



Area of Islands

Island	Area (square kilometres)	Municipality
Bruny	362	Bruny (a)
King	1 099	King Island (a)
Flinders	1 374	
Prime Seal	10	
Badger	10	
Vansittart	6	Flinders (a)
Cape Barren	445	
Clarke	113	
Three Hummock	70	
Hunter	74	
Robbins	101	Circular Head
Maria	101	
Schouten	34	Spring Bay
Macquarie	123	Glamorgan
		Esperance
Total islands	3 922	
Mainland Tasmania	64 409	
Total Tasmania	68 331	

(a) Island municipality.

Area of Municipalities and Cities

In the table that follows, the measured areas of local government areas have been rounded to the nearest 10 square kilometres and the area of Tasmania has been rounded to the nearest 100 square kilometres as the accuracy of more detailed measurement is difficult to determine. Where municipal boundaries lie in the sea or an estuary these legal limits have been disregarded so that the stated area relates to a physical boundary (i.e. the coastline). However, the areas shown include all smaller islands which form part of the State.

Area of Statistical Divisions, Sub-divisions and Local Government Areas
(Square Kilometres)

Local government area (statistical division and sub-division in bold type)	Area	Local government area (statistical division and sub-division in bold type)	Area
Hobart (a) (H)	(b) 80	Campbell Town	1 440
Glenorchy (a) (H)	(b) 120	Fingal	2 730
Clarence (H)	250	Flinders	1 990
Brighton (H) (S)	440	Portland	1 580
Kingborough (H) (S)	350	Ringarooma	1 630
New Norfolk (H) (S)	1 320	Ross	1 240
Sorell (H) (S)	780	Scottsdale	1 290
Bothwell (S)	2 610	North Eastern	11 900
Bruny (S)	360	NORTHERN	20 610
Esperance (S)	6 190	Burnie	620
Glamorgan (S)	1 540	Circular Head	4 920
Green Ponds (S)	420	Devonport	120
Hamilton (S)	5 850	Kentish	1 190
Huon (S)	770	King Island	1 100
Oatlands (S)	1 540	Latrobe	550
Port Cygnet (S)	240	Penguin	430
Richmond (S)	570	Ulverstone	510
Spring Bay (S)	1 120	Wynyard	810
Tasman (S)	480	North Western	10 240
HOBERT	940	Gormanston	2 870
SOUTHERN	24 090	Queenstown	140
Launceston (a)	(b) 28	Strahan	3 730
Beaconsfield	640	Waratah	2 710
Deloraine	2 920	Zeehan	3 000
Evandale	990	Western	12 460
George Town	650	MERSEY-LYELL	22 700
Lilydale	680	TASMANIA	68 300
Longford	1 000		
St Leonards	890		
Westbury	900		
Tamar	8 700		

(a) City (b) To nearest square kilometre

At the 1966 Population Census, new definitions based on high population density were employed to fix the boundaries of urban areas. The two major centres in the State at the 1971 Population Census, with boundaries conforming to the definitions, were: (i) Urban Hobart (approximately 112 square kilometres); and (ii) Urban Launceston (approximately 74 square kilometres). (See Chapter 6 for definition of these areas.)

LAND TENURE

Introduction

The area of Tasmania is 68 300 square kilometres, all of which had been proclaimed as Crown property when the first settlers arrived in 1803. In the period since their landing 40.2 per cent of the State's total area has been alienated by grant or sale; the Crown still owns 57.7 per cent and the residual 2.1 per cent is in the process of alienation (i.e. being purchased from the Crown by instalment payments).

Crown Lands

The following table classifies the area of the State by ownership (i.e. alienated or Crown). (For details of land alienation from 1820 see the 1977 and earlier Year Books.) Crown forestry reservations, apart from one component, is land used or to be used exclusively for forestry purposes; the exception is the forested area of recreation and conservation reservations. The forestry reservations account for 31.9 per cent of the State's area.

Alienation and Occupation of Crown Lands at 30 June
(^{000 Hectares})

Classification of land	Area				
	1973	1974	1975	1976	1977
Alienated (aggregate) (a)	2 729	2 731	2 755	2 751	2 743
In process of alienation (a)	133	135	159	154	146
Crown lands—					
Leased or licensed—					
Through Lands Department (a)—					
Pastoral	200	188	173	170	105
Other (b)	12	12	12	12	9
Through Mines Department (c)	36	36	38	47	49
Total	248	236	223	229	163
Forestry reservations (d)—					
State forests	1 199	1 345	1 372	1 474	1 475
Other (e)	795	686	668	567	704
Total	1 994	2 030	2 040	2 040	2 179
Other Crown land (a)	1 726	1 698	1 653	1 656	1 599
Total area of State	6 830	6 830	6 830	6 830	6 830

(a) Estimates only.

(b) For closer settlement and soldier settlement, and short-term.

(c) Includes a small area of private land leased through the Mines Department.

(d) Includes areas under pulpwood concessions and exclusive forest permits; see Chapter 8 for further details.

(e) Includes estimated forested component of State reserves.

Although the possibility of rapidly alienating more Crown land for farming purposes on any large scale may seem remote, it should be noted that a large proportion of Crown land is nevertheless of importance to the State's economy, specifically for forestry and tourism purposes.

National Parks and Wildlife Service

The *National Parks and Wildlife Act 1970* repealed the *Animals and Birds Protection Act 1928* and the *Scenery Preservation Act 1915* and placed the management and control of parks, reserves, fauna and flora in the hands of a single authority, the National Parks and Wildlife Service. This authority has wide-ranging powers covering the management of parks, protection of fauna and flora, regulation of hunting and enforcement of regulations under the Act. It is responsible for the administration of State reserves and conservation areas. Areas designated as State reserves have maximum protection and include areas classified as national parks, State reserves, nature reserves, Aboriginal sites and historic sites. Conservation areas are usually set aside for the protection of flora and fauna.

State Reserves

The following gives a brief description of principal State reserves:

Ben Lomond National Park: Is located 45 kilometres south-east of Launceston. This high plateau area includes Legges Tor and is Tasmania's principal skiing area.

Cradle Mountain-Lake St Clair National Park: This is an area of rugged mountain scenery; it contains some of Tasmania's highest peaks (Mt Ossa, Barn Bluff, Mt Pelion West and Cradle Mountain), numerous lakes, deep gorges and several waterfalls. Flora and fauna in the park are representative of Tasmania's montane species and are in a largely untouched condition. The weather of the area is unpredictable and at times extremely severe—blizzards are common and may occur in mid-summer. The principal walking track extends from Cradle Valley (in the north) to Lake St Clair, a distance of 85 kilometres.

Frenchmans Cap National Park: The park boundary is three kilometres from the Lyell Highway and about midway between Queenstown and Derwent Bridge. Access to the park is by foot. It is an area of rugged glaciated landscape and is an ideal wilderness area for experienced bushwalkers. Frenchmans Cap, an enormous white quartz peak with a 300 metre face on the eastern side, is the principal feature of the park.

Freycinet National Park: Occupies the whole of Freycinet Peninsula on the east coast. A principal feature of the park is the 300 metres high red granite Hazards. The park provides pleasant walking throughout the year, although during summer water may be scarce. To the south of Freycinet Peninsula is Schouten Island, also a State reserve.

Hartz Mountains National Park: Is located south-west of Geeveston. The main features of the park are Hartz Mountain, 1 253 metres high, several small picturesque lakes, and the superb eastward view from Waratah Lookout. The park is renowned for its display of wildflowers during summer.

Maria Island National Park: Is situated off the east coast from Orford and may be reached by chartered boat or aeroplane. The *Maria Van Diemen* provides a daily passenger service to the island from Triabunna all year round. Principal attractions include convict ruins from two penal settlements, the main one being at Darlington on the north-west corner of the island. Forester kangaroo, Bennetts wallaby and other Tasmanian fauna have been established on the island and emu have been introduced. At the north-east corner of the island high fossil cliffs rise abruptly from the sea.

Mount Field National Park: This park, near Maydena and only 75 kilometres from Hobart, is the only southern ski resort in Tasmania and includes spectacular mountain scenery. Principal peaks are Mt Field East and West; other features include Russell Falls, Lake Dobson and several tarns.

Port Arthur and Tasman Peninsula: This historic and scenic area is possibly the best known and most visited tourist attraction in Tasmania. The area, in addition to the historic convict ruins of the Port Arthur penal settlement, contains many small reserves of either historic or scenic significance. Port Arthur, site of a convict settlement from 1830 to 1877, has a number of historic ruins. Unfortunately many of the buildings are in an extreme state of disrepair; however, some restoration work has been undertaken and a draft management plan for the site is under preparation. Other historic sites include the old convict coal mines at Plunkett Point and Eagle Hawk Neck where guards were stationed and a line of dogs tethered

to prevent escape from the Peninsula. Eagle Hawk Neck is also renowned for its spectacular coastal landforms, e.g. the Blowhole, Devils Kitchen, Tasman's Arch and the Tessellated Pavement.

South-West National Park: Is Tasmania's largest State reserve and covers 403 240 hectares of Tasmania's rugged south-west. It is a true wilderness area and encompasses the Western and Eastern Arthur Ranges, Federation Peak, Frankland Range, Mt Anne, Lake Pedder, and part of the rugged south coast. Dense scrub, which covers much of the area, frequent harsh weather and a scarcity of cleared tracks make this area the domain of the experienced, self-contained bushwalker.

State Reserves and Conservation Areas

The following table lists the Tasmanian national parks, their areas and locations. The 1976 *Year Book* also includes details of all other reserves (State reserves, historic sites, Aboriginal sites and nature reserves) and conservation areas under National Parks and Wildlife Service management (an up-to-date list may be obtained from the National Parks and Wildlife Service). At 30 June 1976 the total area of reserves was 454 578 hectares, while that of conservation areas was 514 722 hectares.

National Parks at 30 June 1978

Name	Area (hectares)	Date first gazetted	Location	Remarks
Asbestos Range	4 281	7.7.76	North coast	Coastal heathland
Ben Lomond	16 457	23.7.47	North-east	Mountainous, ski-field
Cradle Mt-Lake St Clair ..	126 205	16.5.22	West central	Mountainous, lakes
Frenchmans Cap	13 000	4.6.41	West central	Mountainous, scenic
Freycinet	10 010	29.8.16	East	Coastal, red granite
Hartz Mountains	8 620	24.5.39	South	Mountainous, scenic
Maria Island	9 672	14.6.72	East	Wildlife, convict station
Mount Field	16 257	29.8.16	South central	Mountainous, scenic, ski-field, temperate forest
Mount William	10 595	3.10.73	North-east	Forester kangaroo, coastal
Rocky Cape	3 000	21.6.67	North-west	Coastal heath, banksia
South-West	403 240	16.10.68	South-west	Rugged wilderness
Strzelecki	3 946	15.3.67	Flinders Island	Mountainous, coastal
Total	625 283	..	..	..

CLIMATE OF TASMANIA

(The following section was prepared by the Bureau of Meteorology)

Introduction

Since Tasmania lies between 40° and 43½° south of the Equator and is an island with no point more than 115 kilometres from the sea, its climate is classified as temperate maritime. On the coast the daily temperature range averages about 8° Celsius, rising to about 12° Celsius further inland, indicating a slight continental effect.

The combination of mountainous terrain in the western half of the State and prevailing westerly winds produce a marked west-east variation of climate, and especially of rainfall.

Summers are mild and characterised by greatly lengthened days. The sun reaches a maximum elevation of 70-73° in mid-summer, giving 15 hours of daylight in the north and 15½ hours in the south. In mid-winter, the sun's elevation does not exceed 20-23°, and the shortest day consists of 9¼ hours of daylight in the north, falling to slightly under nine hours in the south.

In winter, westerly winds reach their greatest strength and persistence, causing a distinct maximum in rainfall distribution in the west and north-west. In the east and south-east, rainfall is more evenly distributed throughout the year. Coastal areas of Tasmania enjoy relatively mild winters as compared with Boston (U.S.A.), for example, which is about the same latitude north but experiences more severe winter weather conditions.

Winds

The prevailing winds over most of the island are north-west to south-west, with greatest strength and persistence during late winter. Speed and direction vary with the eastward passage of high and low pressure systems. In the summer months, when westerlies are weak, afternoon sea-breezes become the predominant wind in coastal areas. Occasional periods of north-east to south-east winds occur.

The highest average wind speeds are associated with extensive deep depressions over ocean areas south of Tasmania.

Temperature

Sea level temperatures are reduced by approximately 1°C for each 100 metres of altitude. Hence in a mountainous island like Tasmania the isotherms (lines of equal temperature drawn on a map) will be much influenced by topography. Greater cloud cover over the western half, a result of the persistent westerlies, further decreases day-time temperatures in the west, while the Föhn effect warms and dries the westerly airstreams as they descend to the Midlands, the east coast and south-east districts.

The incidence of frosts is affected markedly by topography, the valleys acting as natural channels for the drainage of cold air at night. Widespread severe frosts are experienced in winter on the Central Plateau and in upland valleys. Inland centres below 300 metres are virtually frost-free only in summer, while the north coast, the east and south-east have few frosts after early October. Above 300 metres there is no frost-free month.

Tasmania only occasionally experiences the extremes of temperature common to the other states. High temperatures recorded in the east and south-east of Tasmania generally occur on the last day of a warm spell during which a dry air mass of mainland origin is advected over the State, from a direction between north and north-west. Some cooling in the lower air layers over the waters of Bass Strait prevents the northern coast from reaching the higher temperatures that are experienced in the south under these conditions. The highest temperatures ever recorded in Tasmania are 40.8°C at Bushy Park in December 1945 and at Hobart in January 1976. The lowest temperature recorded was -12.8°C at Oatlands in May 1902.

The recorded extremes of temperature for Hobart are 40.8°C in January 1976 and -2.8°C in June 1972. Readings above 38°C or below -1°C are rare, the mean maximum temperature in summer being 21.1°C and the mean minimum in winter, 4.9°C .

The mean maximum temperature for January and the mean minimum temperature for July over Tasmania are shown in the two accompanying maps. The mean maximum is the average of daily maxima for January; the mean minimum the average of daily minima for July.

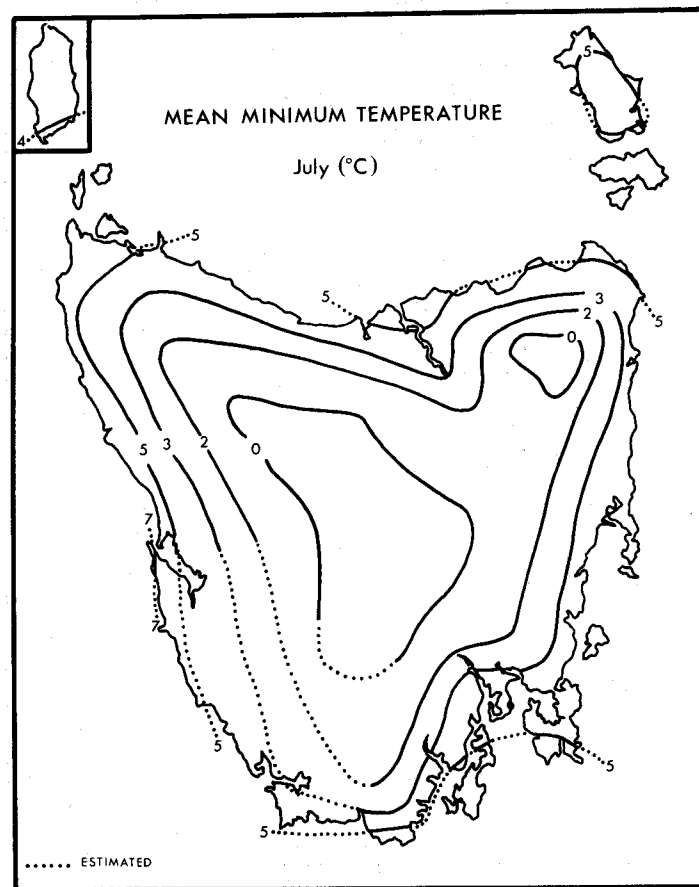
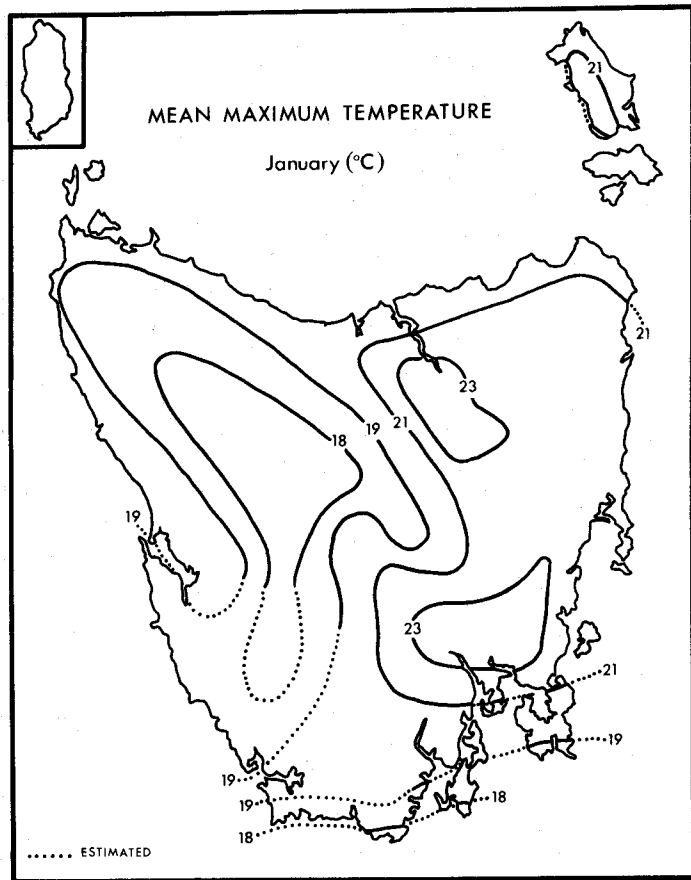
Rainfall

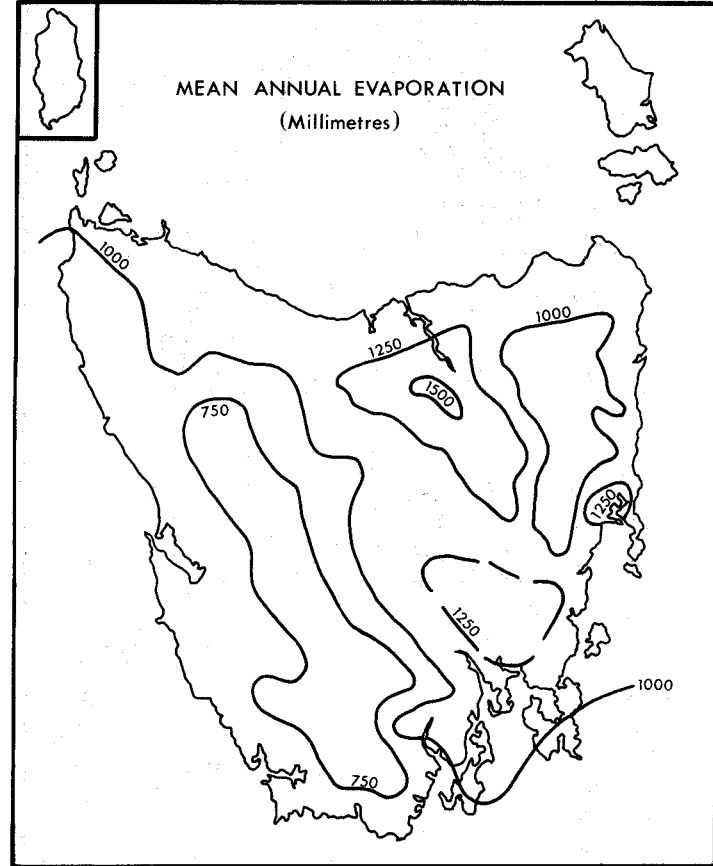
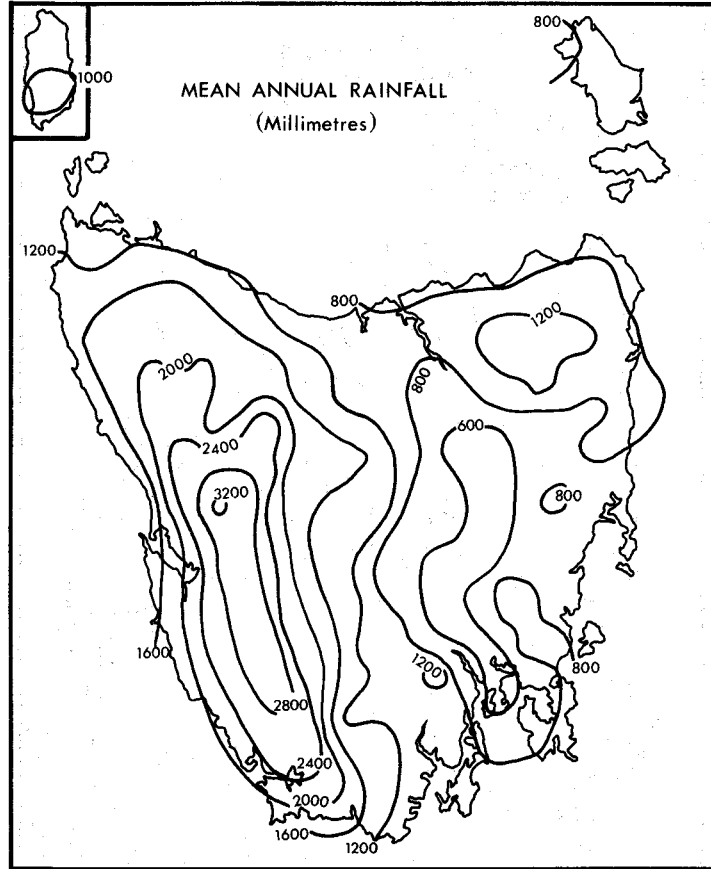
Tasmania's position on the northern edge of the 'Roaring Forties' (a westerly air-stream), its exposure to this stream and the mountainous nature of the terrain are the controlling influences on the amount, distribution and reliability of the State's rainfall.

In the west, average annual rainfall ranges from 1 300 to 1 500 mm on the coast to 3 600 mm at Lake Margaret; in the north-east, from 550 mm on the coast to 1 300 on the highlands; while rainfall in the north-west ranges from 900 mm near the coast to 1 750 mm in the higher inland areas.

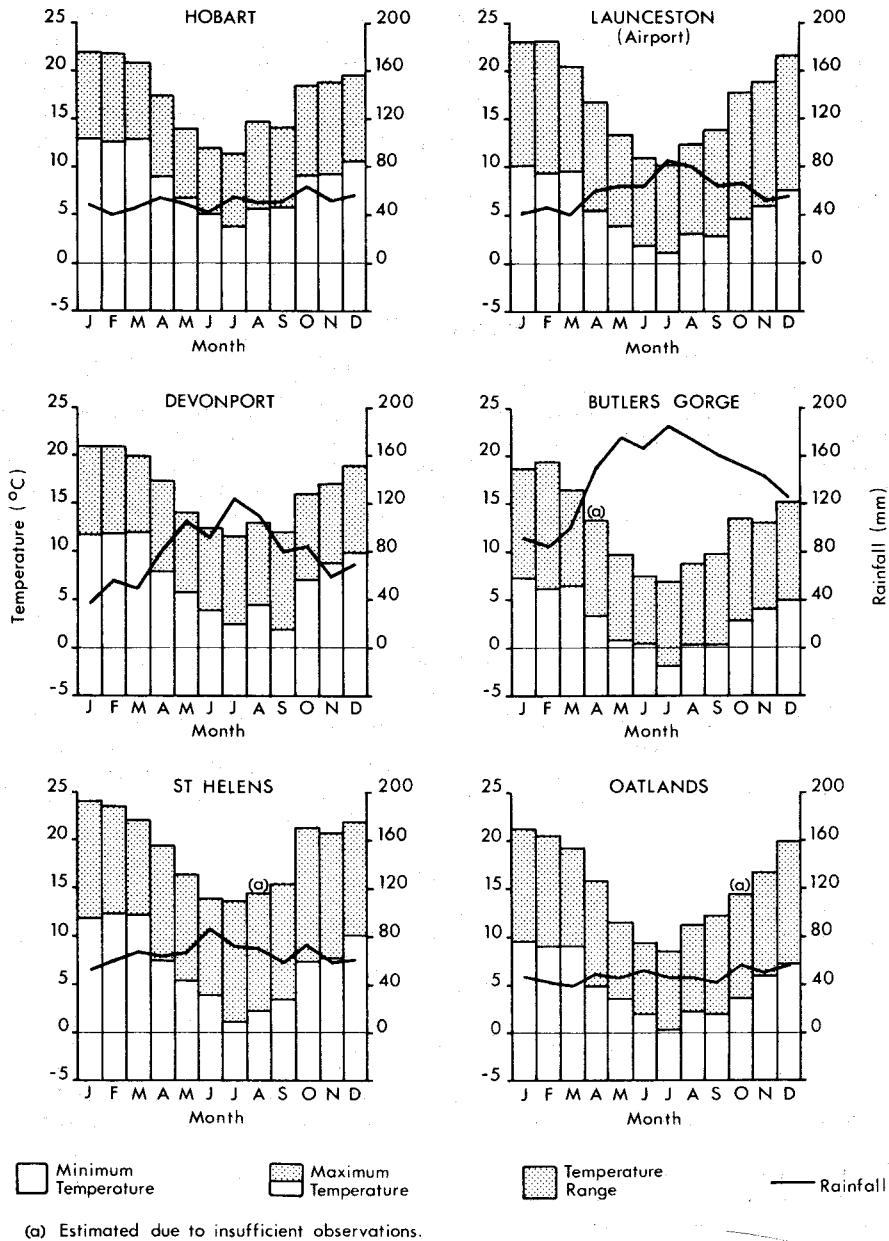
Extreme three to five-day rainfalls occur most often on the west coast in late June when the westerlies are increasing in strength and persistence and the sea temperature is well above the land temperature. In the north, short periods of extreme precipitation occur when wind flow is sustained for up to two days from the north-east, usually in mid to late autumn. The high moisture content of such streams from over the relatively warm waters of the Tasman Sea results in heavier, if less prolonged, rainfall than is produced in the westerly streams.

There is a strong gradation in rainfall from west to east, because of topography, with a distinct rain shadow east of the Central Plateau. Parts of the Midlands average less than 500 mm per year. Totals in the east and south-east are higher (up to 1 000 mm on exposed slopes).





Temperature and Rainfall at Selected Stations, 1977



Rainfall is least reliable in the east, south-east, Midlands and Derwent Valley. These areas are driest when westerlies are relatively absent or at their strongest—in late summer and late winter, respectively. Highest rainfall in these areas tends to occur in autumn and spring, under the influence of small cyclonic depressions off the east coast.

Effective rainfall is the amount necessary to compensate for evaporation, begin germination and maintain plant growth above wilting point. Average rainfall is sufficient for this purpose from May to September. From October to January the chance of receiving effective rainfall decreases, except in the west and north-west, where the probability is usually better than 50 per cent. In the Midlands, the Derwent Valley, the south-east and east, and in the northern inland, the chance of receiving at least effective rainfall during the summer months is very small.

The average annual rainfall distribution over Tasmania is shown on an accompanying map.

Snow and Hail

Snow and hail can be experienced over the highlands at any time of the year. Heaviest snowfalls occur, as a rule, in late winter and spring, and less frequently in June and July. Extensive snow below 150 metres occurs, on the average, less than once every two years, associated with an unusually vigorous outbreak of cold air from Antarctic regions. There is no permanent snowline, but patches of snow often remain on the highest peaks until December.

Hail is most likely in spring, though possible in any month. Hail storms are a big risk to fruit crops in the Huon Valley and on the Tasman Peninsula, and sometimes cause extensive damage.

Thunderstorms

These are most common in the north and north-west of the State and are associated with the lifting of warm moist air by a cold front. Thunderstorms occur mainly in the summer months. Hobart and Launceston average five to seven storms per year, and the north and north-west, 10 to 15. The Central Plateau and north-eastern highlands report, on average, about five storms per year, while the Midlands, as gauged by Oatlands, has less than three.

Floods

In Tasmania the river system most affected by flooding is the South Esk. The Esk catchment includes most of the north-eastern highlands, where annual rainfall averages about 1 300 mm, and part of the Western Tiers where run-off can be rapid. As many rivers in the South Esk system flow through flat country, flooding can be widespread and disruptive.

Flooding of the Derwent River system can be extensive but is less frequent than in the South Esk. The most severe flood on record in the Derwent occurred in April 1960 with the peak discharge flow recorded as 3 400 cumecs (cubic metres per second) at Macquarie Plains. However, it is most unlikely that flooding of this severity will again occur on the Derwent due to the completion of four dams across the River since 1960 by the Hydro-Electric Commission.

Flooding of rivers in the west and south of the State can be of greater frequency than in the Derwent and Esk systems but because of mountainous terrain and lack of population these pass mostly unnoticed. Similarly, the short, fast-flowing rivers of the east coast flood and fall rapidly, but can cause damage and disruption of road systems.

On two occasions in 1974 torrential rain caused severe flooding in the north-east of Tasmania. There was widespread damage to property, serious damage to road systems and high stock losses in the floods which occurred less than two months apart.

In the north and north-west of Tasmania many rivers have their catchments along the northern edge of the Central Plateau and can flood quickly.

Humidity

The mean relative humidity at both 9.00 a.m. and 3.00 p.m. exceeds 50 per cent at all stations in all months of the year. Relative humidity is generally higher in the morning than in the afternoon, and higher in coastal regions than inland. Days of high temperature combined with uncomfortably high humidity are rare. In the east and south-east, warm dry winds from a west or north-west direction may occasionally have a relative humidity as low as 10 per cent.

Droughts and Bushfires

Although Tasmania has the highest average rainfall of any state in Australia drought conditions are not unknown. Unlike the remainder of Australia droughts in this State tend to be highly localised and of reasonably short duration. The most severe effects are usually felt over a period of only a few months, but serious rainfall deficiencies can extend over a period of two or three years. Prior to 1972 the most severe long term droughts occurred during the periods 1888-1889, 1897-1898, 1918-1920, 1933-1934, 1945-1946, 1949-1952 and 1967-1969. During the 12 month period ended January 1973 record low rainfall was recorded in the Midlands, East Coast and Northern rainfall districts. All other rainfall districts experienced below normal rainfall during 1972. Some relief from the drought conditions was given by reasonable rainfalls during February 1973.

Serious bushfires occurred in 1898, 1915, 1946, 1951 and 1967. The bushfires of 7 February 1967 were the most severe in the State's history causing 62 deaths and damage to property estimated to be in excess of \$25m.

Evaporation

Evaporation depends mainly on wind strength, the moisture deficit of the airstream and on sunshine. The World Meteorological Organisation has asked for standardisation of measurement of evaporation by use of the Class 'A' pan (a galvanised pan, 1.22 metres in diameter and 25.4 centimetres deep) which gives higher figures for evaporation than those obtained from the containers previously used in Australia (Class 'A' pan figures should be multiplied by a factor of about 0.80 to obtain the average potential evapo-transpiration likely for Tasmanian crops). The last map gives details for mean annual evaporation.

At Launceston Airport the annual evaporation is just under 1 500 mm due largely to the prevalence of winds coming from the Western Tiers, which become warmer and drier in their descent to the lower Midlands and Tamar areas, thus increasing evaporation. Monthly evaporation at Launceston Airport has ranged as high as 270 mm in summer but drops to between 25 and 40 mm in winter. This area of high evaporation extends southward to the lower Derwent and Huon areas. The lowest evaporation rate occurs in the Central Plateau, West Coast Ranges and south-west areas where annual evaporation may fall to less than 750 mm. This is due to the high moisture content of the prevailing westerlies and the high average cloud cover. In these areas the monthly evaporation rate may range from about 125 mm in January to only 12 mm in June and July.

Another area of lower evaporation (below 1 000 mm a year) is located in the North-East Highlands.

Sunshine

The average number of hours of sunshine a year ranges from about 2 500 hours in the northern Midlands to less than 1 750 hours on the west coast and western highlands, this area having the least amount of sunshine in Australia. Hobart averages 2 100 hours per year and Launceston around 2 400.

In January, daily averages of sunshine range from nine hours per day between the Midlands and Launceston to six hours per day on the west and south coasts. In mid-winter, average daily sunshine is down to a maximum of three hours on the east coast and to considerably less on the west coast and highlands.

The Climate of Hobart

Climatic Data: The next table gives the main climatic data for Hobart during the year 1977 on a monthly basis:

Hobart Weather in 1977

Month	Shade temperature				Mean daily hours of sunshine	Rainfall	
	Mean maxima	Mean minima	Extremes			1977	Long-term average
			Maximum	Minimum			
	°C	°C	°C	°C	hours	mm	mm
January	22.0	12.9	30.5	9.1	7.8	48	49
February	21.8	12.6	37.9	8.6	6.8	37	41
March	20.9	12.8	30.6	8.0	6.4	93	47
April	17.5	9.0	24.3	4.3	5.9	15	55
May	14.0	6.6	19.8	3.0	3.3	37	49
June	11.9	5.2	16.1	1.8	3.6	42	59
July	11.4	3.8	15.2	0.4	4.6	64	54
August	14.7	5.6	24.5	1.8	6.1	18	51
September	14.2	5.7	22.5	2.2	5.1	41	52
October	18.6	9.1	31.0	4.4	7.5	22	64
November	18.8	9.3	32.7	3.4	7.3	69	56
December	19.6	10.7	26.4	6.1	8.7	12	57
Total for year .....	..	..	..	..	..	495	634

Temperatures: Mean maximum temperature exceeds 21°C in January and February. On average there are two or three days per year with maximum temperatures greater than 32°C. Only once, in February 1968, have three successive days over 32°C been recorded in Hobart. Minimum temperatures below -1°C are rare.

Rainfall: There is a strong gradient of rainfall, immediately west of Hobart suburbs, caused by the bulk of Mt. Wellington. On the south-eastern slopes of the mountain the annual rainfall reaches 1 400 mm (at The Springs and The Gap) while at Fern Tree the annual average is 1 140 mm. The rainfall decreases to about 600 mm in the city area, the annual average being 634 mm at the Regional Office of the Bureau of Meteorology. Some eastern shore suburbs receive as little as 500 mm of rain per annum.

Monthly totals are fairly uniform. The wettest 12 months on record at the Bureau's Hobart Office yielded 1 100 mm (to December 1916) and the driest, 320 mm (to November 1943).

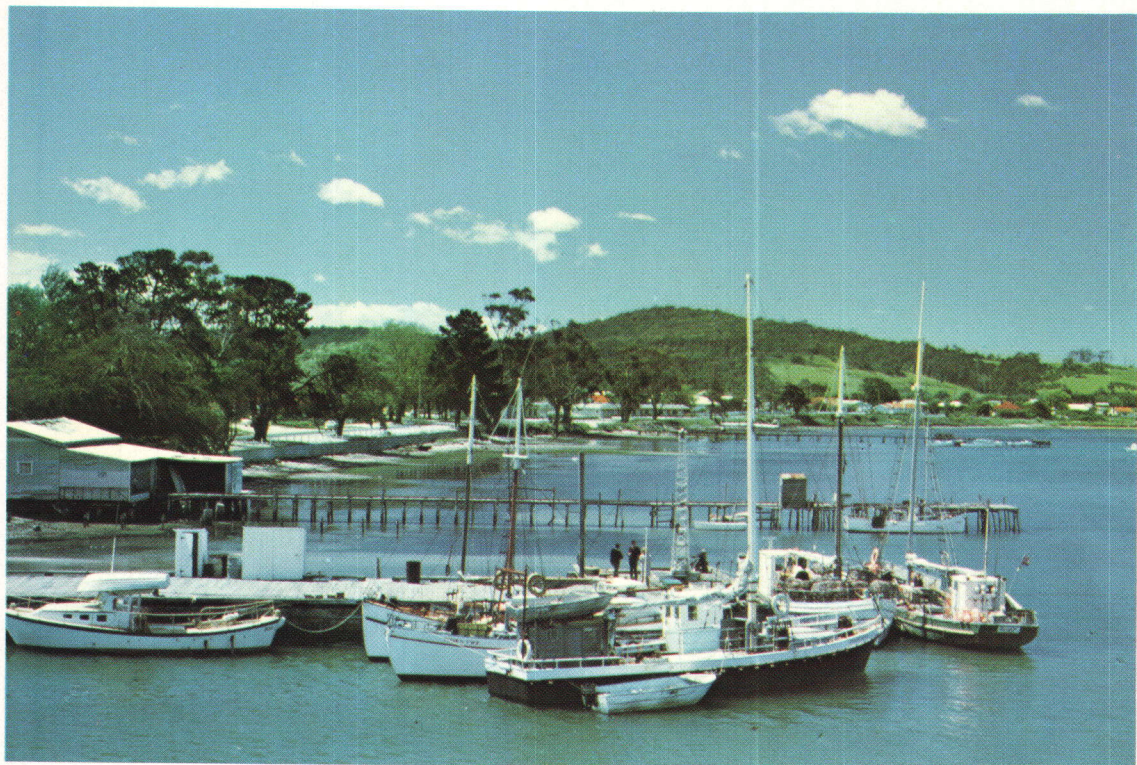
Relative Humidity: Highest humidity is at the time of lowest temperature, in the early morning during winter. As temperatures rise to 3.00 p.m., humidity decreases by 15-20 per cent. The seasonal variation is not great, although the average humidity during the winter months is 70 to 75 per cent and during the summer months 58 per cent. Periods of high humidity combined with high temperatures are rare.

Fog: Fogs occur in the city about four times per year, in the cooler months, but are more frequent over and near the Derwent River, down which they are often carried on a light north-west wind. Fog frequency is far less than either that of Launceston or Melbourne.

Wind: The main wind direction is north-west, induced by the orientation of the Derwent Valley. Next in importance is the sea-breeze (from south or south-east) during summer months.

The strongest wind gust experienced in Hobart was 150 km/h recorded during a storm in September 1965.

Snow and Hail: Snow below 300 metres occurs, on the average, less than once per year. Falls lying in the centre of the city, almost at sea level, have occasionally been recorded, the last being in September 1970. Snow generally lies on Mt Wellington during winter and early spring months, but it is rare between November and March. Hail occurs about four times a year, mainly between September and November.



St. Helens

[H. M. Moore]

Wineglass Bay





Eddystone Light

[H. M. Moore]

Frost: The average annual frequency of days of frost is 29, mostly from June to August. None has been recorded in January. Cold air drainage is found in the hilly suburbs and frosts are common on the valley floors.

Sunshine and Cloud: No marked seasonal variation of cloud amount occurs but a strong dependence on time of day is evident. During April to September cloud cover is greater in the afternoon and from October to March it is greater in the morning.

A clear-cut seasonal variation in monthly average hours of sunshine also occurs with amounts varying from 231 hours in January to 111 hours in June.

The Climate of Launceston

Being over 50 km from the coast, Launceston exhibits a slight continental effect—greater seasonal and daily variations of temperature and lower rainfall as compared with stations on the coast.

Temperature: Average maximum temperature exceeds 24°C in January and February, 21°C in December and March, and 13°C in June and July. Average minimum is about 11°C in summer, falling below 4°C in winter. Freezing temperatures are common during winter mornings, the lowest recorded being—6°C. Up to 50 frost days are to be expected in a year, mostly from May to August. Light frosts may occur in summer.

Rainfall: The annual average is 719 mm. The wettest month is July (83 mm) while February and March, the driest months, each receive less than half this amount. The wettest month on record is August 1936 (254 mm). Annual totals range from 467 mm (1908) to 1 057 mm (1946). Some severe thunderstorms are experienced. Snow does not settle in Launceston, but falls occur on surrounding hills.

Relative Humidity: Seasonal and daily variations are similar to those for Hobart but the daily readings are 5 to 10 per cent higher.

Fog: Occasions of high humidity, associated with moist north-east airstreams, are relatively frequent. Fog occurrence averages more than 30 days a year, mostly between May and August.

Winds: The NW-SE orientation of the Tamar Valley has a marked effect on surface winds, which conform mainly to these directions. The north-west wind is often reinforced in the afternoon by a sea-breeze from much the same direction. Strong winds are most common during the colder half of the year and severe squalls can occur in association with thunderstorms.

Rainfall Statistics

Meteorological Districts

Tasmania is divided into nine meteorological districts (not to be confused with statistical divisions) with fairly well-defined land use patterns appropriate to each. The following table shows rainfall totals of each district for the past 10 years:

Rainfall of Tasmania in Districts
(Millimetres)

Period	Northern	King Island	Central Plateau	Midlands
	Crops, dairying and mixed farming		Grazing (mainly sheep)	
1968	1 120	1 069	1 254	467
1969	972	924	1 111	598
1970	1 074	957	1 373	721
1971	1 218	1 184	1 160	645
1972	636	746	877	351
1973	1 154	1 031	1 137	611
1974	1 192	969	1 041	672
1975	1 318	1 265	1 299	715
1976	839	1 095	905	519
1977	903	994	989	511
District average (a)	1 006	951	986	556

Rainfall of Tasmania in Districts—continued
(Millimetres)

Period	Derwent Valley	South East	East Coast	West Coast	Flinders Island
	Fruit growing, grazing, forestry		Dairy farming	Mining	Grazing
1968.....	738	725	560	3 168	673
1969.....	735	881	1 024	2 423	814
1970.....	826	989	1 228	2 533	1 023
1971.....	891	945	1 021	2 460	950
1972.....	610	568	497	2 122	583
1973.....	775	786	779	2 605	871
1974.....	734	868	1 071	2 260	906
1975.....	931	1 036	949	2 814	717
1976.....	618	888	831	2 306	699
1977.....	612	709	710	2 456	615
District average (a)	682	753	827	2 337	744

(a) Long-term annual average based on 65 years of record.

Rainfall at Selected Stations and Rainfall Index by Districts

The table below shows the annual rainfall for selected stations over the last five years.

Annual Rainfall at Representative Stations
(Millimetres)

Station	1973	1974	1975	1976	1977	Long-term average (a)
Avoca.....	583	735	875	571	527	567
Beaconsfield.....	1 305	1 271	1 328	833	869	963
Burnie (APPM).....	1 260	1 214	1 472	866	866	1 027
Campbell Town.....	613	599	725	494	528	550
Cradle Valley.....	3 352	2 984	3 504	2 641	n.a.	2 802
Cressy Research.....	835	825	880	485	647	654
Deloraine (East).....	1 386	1 241	1 429	873	917	1 169
Franklin.....	817	941	1 015	913	702	911
Hobart (Weather Bureau).....	605	696	828	663	495	634
Hobart (Airport).....	557	655	735	622	484	577
Kettering.....	777	921	1 033	1 058	798	891
Launceston (Airport).....	850	873	820	520	632	720
Lilydale.....	1 228	1 202	1 138	960	930	977
Lymington.....	789	840	1 166	n.a.	711	798
Maydena.....	1 308	1 207	1 582	1 106	1 219	1 234
New Norfolk.....	547	559	770	516	396	562
Oatlands.....	609	610	675	543	463	571
Queenstown.....	2 734	2 400	2 782	2 486	2 576	2 537
Ringarooma.....	1 487	1 528	1 496	1 148	1 086	1 234
Savage River.....	2 068	1 886	2 311	1 974	n.a.	2 031
Smithton.....	1 345	1 223	1 413	1 045	1 118	1 109
Springfield South.....	n.a.	n.a.	1 567	n.a.	n.a.	1 275
St Helens.....	787	1 016	938	856	706	786
St Marys.....	1 023	1 909	1 372	1 150	872	1 038
Swansea.....	600	830	627	592	468	622
Triabunna.....	658	918	819	724	553	667
Ulverstone.....	1 270	1 214	1 361	771	872	973

(a) Number of years of record used to calculate the long-term average varies from station to station.

The next table gives details of a rainfall index for meteorological districts by month for 1977. The index shows the actual rainfall for a district expressed as a percentage of 'normal' rainfall (where 'normal' rainfall or the 'district average' is the mean for the 65-year period 1913-1977, i.e. the long-term average based on 65 years of record—details relating to annual rainfall and annual district average (normal) rainfall are shown in an earlier table).

Rainfall Index by Districts, 1977

(Index showing actual rainfall for each month expressed as a percentage of normal (a) rainfall)

Period	Meteorological district							
	Northern	King Island	Central Plateau	Midlands	Derwent Valley	South-east	East Coast	West Coast
January	147	178	137	139	93	133	142	121
February	102	98	98	183	93	96	205	58
March	283	124	193	208	198	135	168	136
April	37	67	106	32	57	67	17	149
May	138	128	110	167	83	79	100	116
June	93	140	91	80	67	99	81	98
July	47	64	88	69	95	159	82	104
August	96	88	91	72	78	52	58	86
September	21	68	46	50	51	92	59	40
October	61	101	68	51	66	51	39	114
November	132	224	119	110	121	128	106	117
December	38	33	106	13	107	52	20	133
1977 ...	90	105	100	92	90	94	86	105

(a) Normal rainfall is the mean for the 65-year period 1913-1977.

Seasonal Temperatures

The mean temperature for any locality can give a false impression, e.g. a mean temperature of 25°C based on a maximum of 50°C and a minimum of 0°C, all in the one day. A better way of examining a locality's climate is to take the maximum temperature each day and average these readings for each season; similarly, to take the minimum temperature each day and average these readings for each season. These mean maxima and mean minima then give an indication of the daily variation that may be expected. The following table shows the mean maximum and mean minimum temperatures for nine selected stations in summer, autumn, winter and spring.

Temperatures at Selected Stations, 1977
(°C)

Station	Maximum temperatures		Minimum temperatures		Mean temperatures	
	Mean for 1977 season (a)	Departure from normal (b)	Mean for 1977 season (c)	Departure from normal (b)	Mean for 1977 season	Departure from normal (b)
Summer (December to February)						
Hobart	20.8	-0.2	11.3	0.0	16.0	-0.4
Launceston	23.4	-0.3	10.2	-0.9	16.8	-0.6
Cape Bruny	17.3	-0.3	10.6	-0.3	13.9	-0.3
Devonport	19.8	-1.3	10.8	-0.7	15.3	-1.0
Maydena	19.9	-1.0	7.4	-0.6	13.6	-0.8
Oatlands	21.0	0.0	8.2	+0.3	14.6	+0.2
St Helens	22.4	+0.5	11.0	+0.1	16.7	+0.3
Savage River	n.a.	n.a.	8.8	-0.6	n.a.	n.a.
Zeehan	17.5	-1.9	8.9	0.0	13.2	-0.9

Physical Environment

Temperatures at Selected Stations, 1977—continued
(°C)

Station	Maximum temperatures		Minimum temperatures		Mean temperatures	
	Mean for 1977 season (a)	Departure from normal (b)	Mean for 1977 season (c)	Departure from normal (b)	Mean for 1977 season	Departure from normal (b)
AUTUMN (March to May)						
Hobart	17.5	+0.4	9.5	+0.8	13.5	+0.6
Launceston	18.6	-0.4	5.8	-1.5	12.2	-0.9
Cape Bruny	16.1	+0.9	10.1	+0.7	13.1	+0.8
Devonport	17.2	-0.4	8.6	-0.3	12.9	-0.3
Maydena	15.8	+0.1	5.7	+0.5	10.7	+0.3
Oatlands	15.3	-0.5	5.8	+0.8	10.5	+0.2
St Helens	19.4	+1.0	8.3	+0.8	13.8	+0.4
Savage River	13.7	-1.0	7.5	+0.1	8.1	-0.4
Zeehan	15.5	-0.3	6.4	-0.6	10.9	-0.4
WINTER (June to August)						
Hobart	12.7	+0.7	4.9	+0.1	8.8	+0.4
Launceston	12.6	-0.2	0.9	-1.3	6.7	-0.7
Cape Bruny	11.9	+0.6	6.5	+0.4	9.2	+0.5
Devonport	12.4	-0.4	3.6	+0.8	8.0	+0.2
Maydena	10.4	+0.3	1.7	+0.2	6.0	+0.2
Oatlands	9.7	-0.3	1.4	-0.2	5.5	-0.2
St Helens	14.5	+0.9	2.8	-0.4	8.6	+0.2
Savage River	9.7	+0.3	3.8	0.0	6.7	+0.1
Zeehan	11.2	0.0	3.8	+0.2	7.5	+0.1
SPRING (September to November)						
Hobart	17.2	+0.6	8.0	+0.5	12.6	+0.5
Launceston	18.1	+0.7	5.5	-1.3	11.8	-0.3
Cape Bruny	14.5	-0.2	7.8	+0.1	10.6	0.0
Devonport	15.7	-0.8	6.7	-0.4	11.2	-0.6
Maydena	15.4	+0.5	4.2	+0.1	9.8	+0.3
Oatlands	15.4	-0.1	4.5	+0.2	9.9	0.0
St Helens	19.2	+1.8	6.2	0.0	12.7	+0.9
Savage River	13.7	+0.7	5.8	+0.5	9.7	+0.6
Zeehan	15.1	+0.2	5.9	+0.1	10.5	+0.1

(a) Average of maximum daily temperatures for season.

(b) 'Normal' is the mean for the season averaged for the available years of record.

(c) Average of minimum daily temperatures for season.

ENVIRONMENTAL CONTROL

Department of the Environment

Established in October 1972, the Department of the Environment is headed by a Director of Environmental Control who is responsible to the Minister for the Environment. At the beginning of 1978 the Department had a staff of 35 persons to carry out the task of environmental protection. The staff included a number of scientific experts who were responsible for particular aspects of pollution control and assessment—chemists, noise control, research, air and water pollution officers and a waste management officer.

The *Environment Protection Act 1973* gives the Director the general duties of: (i) protecting the State's environment; (ii) ensuring the control or prevention of any act or emission which causes or may lead to pollution; and (iii) co-ordinating all necessary activities (government or private) to protect, restore or improve Tasmania's environment. In addition to the general duties the Act also conferred the following more specific functions on the Director: (i) consider means and initiate steps for the protection of the environment and for the prevention, control, abatement or mitigation of pollution; (ii) carry out investigations into

environmental protection problems; (iii) obtain advice from experts in the field of environmental protection; (iv) review progress made in attaining objectives of the Act and publicise steps taken to protect the environment; (v) advise on pollution standards and methods of sampling and testing for pollutants; and (vi) promote and co-ordinate planning projects for environmental protection.

Coverage of the Act: In the case of inconsistencies the *Environment Protection Act 1973* prevails over the provisions of all other Acts with two exceptions: (i) *Oil Pollution Act 1961*; and (ii) *Public Health Act 1962*. Since provisions of the *Environment Protection Act* would intrude into various sectors of existing legislation, the *Statute Law Revision (Environment Protection) Act 1973* was introduced concurrently. The effect of this statute was to amend the Criminal Code, the *Local Government Act 1962*, the *Mining Act 1929*, the *River Pollution Act 1881*, the *Hydro-Electric Commission Act 1944* and the *Water Act 1957* to conform with the *Environment Protection Act 1973*.

Staff of the Department of the Environment continually visit most areas of Tasmania either monitoring or investigating complaints and pollution problems. Departmental officers have attended interstate seminars and conferences and visited other environment protection authorities for exchange of information. The Department participates in the work of the Australian Environment Council and has staff on a number of the Council's committees. In addition the Department is represented on committees of The Australian Transport Advisory Council and The Keep Australia Beautiful Council. The Department is also represented on State Government inter-departmental committees which deal with environmental matters. Environmental seminars and lectures have been organised by the Department and special papers written dealing with the environment.

Environment Protection Advisory Council

The 1973 legislation also provided for the creation of the Environment Protection Advisory Council. Under the chairmanship of the Director of Environmental Control the Council has members drawn from government and private sectors and representing a number of diverse interests; e.g. the mining, secondary, rural and forestry industries, conservation groups, Hydro-Electric Commission, trade unions, public health, etc. The Council's task is to advise the Minister and make recommendations to the Government on environmental matters. The Council is empowered to appoint committees to investigate specific subjects. Committees appointed are—Noise Committee, Waste Committee, Air Committee and the Water Committee. As a result, regulations covering all the above pollution subjects have been promulgated.

An Intensive Animal Husbandry Committee was set up in August 1975 to deal with pollution problems posed by this industry. At present the intensive animal husbandry industry throughout the State is being investigated to allow recommendations to be made to the Council for the establishment of guidelines to control pollution problems. These guidelines, to be issued to operators and local government, will set out design and operation procedures to overcome such problems in the industry.

Environmental Impact Studies

The State Government has adopted a policy that requires public authorities to undertake environmental impact studies before proceeding with any development which may have a significant effect upon the State's environment. Responsibility for ensuring that such studies are performed rests with the decision-making authority. Co-ordination and evaluation of environmental impact studies are performed by the Director of Environmental Control.

Scope of an environmental impact study includes:

- (i) A statement of the major objective of the proposed project.
- (ii) An analysis of the technological likelihood of achieving the objective.
- (iii) A statement of alternative practical plans for achieving the objective.
- (iv) An outline of existing characteristics of the environment prior to implementation of the development project.
- (v) Separate reports on alternative practical engineering plans for achieving the goal.
- (vi) An assessment of the probable effect of the project upon the environment.

Such a study is to be used by the proposing body in determining environmental safeguards. For the Director of Environmental Control a study will provide a basis for review of the safeguards and for making recommendations for further protective measures.

To assist with co-ordination and evaluation of environmental impact studies, the Government has established an Environmental Impact Study Assessment Group, comprising eight specialists in various fields related to the environment. The group gives broad direction to impact studies and provides advice and assessment services to the Director of Environmental Control and developers.

Further References

DAVIES, J. L. (ed.) *Atlas of Tasmania* (Lands and Surveys Department, Hobart, 1965)
Monthly Weather Review, Tasmania (published monthly by the Bureau of Meteorology, Hobart)

Chapter 3

GOVERNMENT AND ADMINISTRATION

Introduction

Government in Tasmania is exercised at three levels:

- (i) The Federal Government, with authority based on a written constitution, and centred in Canberra.
- (ii) The State, with residual powers, and centred in Hobart.
- (iii) The cities and municipalities, with authority derived from State acts, and operating in 49 sub-divisions of the State.

This chapter deals primarily with the State Government and with Tasmanian representation in the Federal Parliament. The administration of the cities and municipalities is described in Chapter 4, 'Local Government'. A more detailed outline of the Tasmanian system of government is included in the 1976 and earlier editions of the *Year Book*.

TASMANIAN REPRESENTATION IN FEDERAL PARLIAMENT

The Federal Parliament consists of the Queen, a Senate and a House of Representatives. The Queen is represented in Australia by the Governor-General.

The House of Representatives

Representation in the House of Representatives is based upon the general principle of having, as nearly as practicable, electorates with equal numbers of electors. This is only possible if regular electoral redistributions are implemented. The following table indicates the state of the House of Representatives at the elections immediately following electoral redistribution and/or passage of legislation creating additional electorates:

Membership: House of Representatives

Year	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	N.T. (a)	A.C.T. (b)	Total
1948	28	20	10	6	5	5	1	—	75
1949 (c)	47	33	18	10	8	5	1	1	123
1955 (c)	46	33	18	11	9	5	1	1	124
1969 (c)	45	34	18	12	9	5	1	1	125
1974	45	34	18	12	10	5	1	2	127
1977 (c)	43	33	19	11	10	5	1	2	124

(a) Representative in House since 1922; full voting rights granted 1969.

(b) Representative in House since 1949; full voting rights granted 1966.

(c) Election following an electoral redistribution.

Elections for the House of Representatives

Australia is currently divided into 124 single-member electorates and electors are required to cast a vote for every candidate standing within the electorate in order of their preference. Election of members is carried out in accordance with the principles of the absolute majority through use of the alternative vote (see 'The Legislative Council—Preferential Voting' for a description of similar electoral principles). If a vacancy occurs in the House of Representatives, it is filled by holding a by-election in the electorate concerned. Elections for the House of Representatives must be held at least every three years.

The following table lists the Tasmanian members of the House of Representatives elected on 10 December 1977, together with the party affiliation and electorate of each member:

House of Representatives: Tasmanian Members

Member	Party affiliation	Electoral division
Burr, M. A.	Liberal	Wilmot
Goodluck, B. J.	Liberal	Franklin
Groom, R. J. (a)	Liberal	Braddon
Hodgman, M.	Liberal	Denison
Newman, K. E. (b)	Liberal	Bass

(a) Federal Minister for the Environment, Housing and Community Development and Minister assisting the Minister for Employment and Industrial Relations.

(b) Federal Minister for National Development.

The Senate

In the Senate, each state is represented by ten senators and, in addition, the Australian Capital Territory and the Northern Territory have been represented by two senators each since the election of 13 December 1975. Each senator's term is normally six years, as half the senate seats come up for election every three years. In accordance with the *Senate Representation of Territories Act*, senators from the Northern Territory and A.C.T. are elected for the term of the House of Representatives. However, in the case of a double dissolution of both Houses, half the senators are elected for a six-year term (the first five elected in each state) and half for a three-year term.

In Senate elections each state is an electorate. Electors are required to cast a vote for every candidate standing within the state in order of their preference. Election of members is carried out in accordance with the principles of proportional representation by the single transferable vote (see 'Elections for House of Assembly' in the 1971 *Year Book* for a description of similar electoral principles).

The following table lists the senators for Tasmania elected on 13 December 1975 and 10 December 1977 (senators elected on 10 December 1977 commenced their terms of office on 1 July 1978), their party affiliation and year of retirement.

Senate: Tasmanian Members

Senator	Party affiliation	Retires in year
Archer, B. R.	Liberal	1984
Grimes, Dr D. J.	A.L.P.	1984
Harradine, R. W. B.	Independent	1981
O'Byrne, J. H.	A.L.P.	1981
Rae, P. E.	Liberal	1981
Tate, M. C.	A.L.P.	1984
Townley, M.	Liberal	1981
Walters, M. S. (Mrs)	Liberal	1984
Watson, J.	Liberal	1984
Wriedt, K. S.	A.L.P.	1981

If a vacancy occurs in the Senate, the appropriate state government nominates a replacement, of the same political affiliation, who sits until the next general election (either for the House of Representatives or for the Senate), when an election is held to fill the vacancy. If a senator fills such a vacancy through an election held at the same time as an election for the House of Representatives, his term will be the same as if the vacating member's term were to run its full course. If the vacant seat is contested at an ordinary Senate election, then six, instead of the normal five candidates, will be elected in the state affected and the senator last elected will fill the vacancy for a term shorter than the full six years.

THE TASMANIAN GOVERNMENT

Division of Power

Under the *Commonwealth of Australia Act 1900*, the State of Tasmania surrendered part of its sovereignty and it was possible, at that point in time, to classify the totality of powers to be vested in the Federal Government and the State as follows:

- (i) Exclusive powers to be exercised by the Federal Government alone.
- (ii) Concurrent powers to be exercised both by the Federal Government and the State (subject to the supremacy of Federal Government law in cases of inconsistency).
- (iii) Residual powers to be exercised by the State.

Since Federation there have been considerable changes in functions actually performed by the two governments due to constitutional amendments and to inter-governmental agreements affecting function. It will suffice, therefore, to list the main fields of activity of the Federal Government today:

Foreign affairs and diplomatic representation; maintenance of the armed forces; customs and excise; posts and telegraphs; control of broadcasting and television; control of civil aviation; repatriation of ex-servicemen; immigration; industrial arbitration for national industries; control of coinage and currency; overseas trade promotion; employment service; age, invalid and widows' pensions; national health benefits; federal territories and overseas dependencies; census and statistics; meteorological service; federal courts and police; control of banking; collection of sales and income taxes; housing assistance and defence service homes; scientific and industrial research; management of state and national debt; lighthouses and navigation; Australian territorial sea and sea-bed. (For a more detailed treatment of this subject, the *Constitution* in Chapter 1 of the *Official Year Book of Australia* is recommended.)

The departments, authorities, etc. of the Tasmanian Government are listed in a later section of this chapter headed 'The Present System of Government.'

The State Governor

Tasmania follows British tradition and accepts as its Queen, Elizabeth the Second. Her Majesty appoints the Governor who acts as head of state, generally for a five-year term. The relationship existing between the Queen and the British Parliament is broadly the same as that existing between the Governor and the Tasmanian Parliament. For details relating to the Governor's powers and functions, see the 1976 and earlier editions of the *Year Book*.

Until the succession of Sir Stanley Burbury, KBE on 5 December 1973, Tasmanian governors had come from the United Kingdom since the first settlement, although in some other states and the Commonwealth, Australians had been appointed to vice-regal offices. Sir Stanley was sworn in on 5 December 1973, succeeding Lt-General Sir Edric Bastyan, a former Governor of South Australia.

The next table shows the succession of governors from 1930. Administrators and lieutenant-governors (who act in place of the Governor in the event of his death, incapacity, removal or absence from the State) are only included where necessary, to maintain a continuous time series (i.e. short periods of relief during a governorship are excluded). A complete list from 1803 is included in the 1976 *Year Book*.

Succession of Governors, Acting Governors, Administrators, etc. from 1930

Name	Designation	Period
Sir James O'Grady, KCMG	Governor	23.12.24-23.12.30
Sir Herbert Nicholls, KCMG	Lieutenant-Governor	23.12.30- 4. 8.33
Sir Ernest Clark, GCMG, KCB, CBE	Governor	4. 8.33- 4. 8.45
Sir John Morris, KT	Administrator	4. 8.45-24.12.45
Admiral Sir Hugh Binney, KCB, KCMG, DSO	Governor	24.12.45- 8. 5.51
Sir John Morris, KCMG	Administrator	8. 5.51-22. 8.51
Rt Hon. Sir Ronald Cross, Bart, KCMG, KCVO	Governor	22. 8.51- 4. 6.58
Hon. Sir Stanley Burbury, KBE	Administrator	4. 6.58-21.10.59
Rt Hon. the Lord Rowallan, KT, KBE, MC	Governor	21.10.59-25. 3.63
Hon. Sir Stanley Burbury, KBE	Administrator	25. 3.63-24. 9.63
Lt-General Sir Charles Gairdner, KCMG, KCVO, KBE, CB	Governor	24. 9.63-11. 7.68
Hon. Sir Stanley Burbury, KBE	Administrator	11. 7.68- 2.12.68
Lt-General Sir Edric Bastyan, KCMG, KCVO, KBE, CB	Governor	2.12.68-30.11.73
Hon. Mr Justice Green	Administrator	30.11.73- 5.12.73
Hon. Sir Stanley Burbury, KBE	Governor	5.12.73-

The Cabinet and Executive Government

General

In Tasmania, as in the other States and the Federal Government, executive government is based on the system which was evolved in Britain in the 18th century, and which is generally known as 'Cabinet', or 'responsible' government. Its essence is that the head of the state (in Tasmania, the Governor representing Her Majesty the Queen) should perform governmental acts on the advice of his ministers; that he should choose his principal ministers of state from members of parliament belonging to the party, or coalition of parties, commanding a majority in the popular house; that the ministry so chosen should be collectively responsible to that house for the government of the country; and that the ministry should resign if it ceases to command a majority there.

The Cabinet system operates chiefly by means of constitutional conventions, customs or understandings, and through institutions that do not form part of the legal structure of the government at all. In law, the executive power of the State is exercised by the Governor who is advised by the Executive Council which he himself has appointed and which meets for certain formal purposes. The whole policy of a ministry is, in practice, determined by the ministers of the Crown, meeting without the Governor under the chairmanship of the Premier, and this body is known as the Cabinet.

The Appointment of Ministers

Legally, ministers hold office during the pleasure of the Governor. In practice, however, the discretion of the head of state in the choice of ministers is limited by the conventions on which the Cabinet system rests. When a ministry resigns, the Governor's custom is to send for the leader of the party which commands a majority in the lower house, and to commission him as Premier, to 'form a ministry'—that is, to nominate other persons to be appointed as ministers of the Crown and to serve as his colleagues in the Cabinet.

The *Constitution Act 1854* defined the Parliament of Tasmania as 'the Governor and the Legislative Council and House of Assembly together'. Although no legal requirements enforce it, the selection of all ministers of the Crown from Parliament stems from the British tradition and sharply contrasts with the American system which requires its ministers not to be members of Congress.

At 14 July 1978 the ministry, led by the Hon. D. A. Lowe, was:

Ministry at 14 July 1978

Name	House	Responsibility (a)
The Hon. D. A. Lowe	Assembly	Premier, Industrial Relations and Manpower Planning, Hydro-Electric Commission
The Hon. N. L. C. Batt	Assembly	Deputy Premier, Treasurer, Economic Planning and Development, Forestry
The Hon. B. K. Miller	Legislative Council	Attorney-General, Consumer and Ethnic Affairs, Emergency Services
The Hon. M. T. C. Barnard	Assembly	Tourism, Health, Licensing
The Hon. E. W. Barnard	Assembly	Primary Industry, Police, Road Safety
The Hon. G. D. Chisholm	Assembly	Housing and Construction, Lands, Supply and Tender
The Hon. D. J. Baldock	Assembly	Main Roads, Transport, Municipal Planning
The Hon. H. N. Holgate	Assembly	Education, Recreation and Arts, Racing and Gaming
The Hon. M. R. Polley	Assembly	Community Welfare and Child Care, Mines
The Hon. A. B. K. Lohrey	Assembly	Environment, National Parks and Wildlife, Water Resources

(a) See section 'The Present System of Government' later in chapter for more detailed statement of responsibility.

Premiers

The following lists Premiers of Tasmania from 1930 (a complete list from 1856 is included in the 1976 *Year Book*):

Premiers from 1930

Name of Premier	Term of office		Duration of office (months)
	From	To	
J. C. McPhee	15. 6.28	15. 3.34	69
Sir Walter Lee	15. 3.34	22. 6.34	3
A. G. Ogilvie (a)	22. 6.34	10. 6.39	60
E. Dwyer Gray	11. 6.39	18.12.39	6
R. Cosgrove	18.12.39	18.12.47	96
E. Brooker	18.12.47	25. 2.48	2
R. Cosgrove	25. 2.48	26. 8.58	126
E. E. Reece	26. 8.58	26. 5.69	129
W. A. Bethune	26. 5.69	3. 5.72	35
E. E. Reece	3. 5.72	31. 3.75	35
W. A. Neilson	31. 3.75	1.12.77	32
D. A. Lowe	1.12.77		

(a) Tasmania had an unbroken succession of Labor premiers, starting with the Ogilvie Ministry (1934) until the resignation of the Reece government (following electoral defeat) on 26 May 1969.

The House of Assembly

The Tasmanian Lower House comprises 35 members elected from five seven-member electorates. The *Constitution Act* 1972 provided that the Assembly chosen at the elections held on 22 April 1972 would continue in office for a maximum term of five years, and that thereafter the term for the House of Assembly would be four years. This Assembly was dissolved after four years and 7 months and elections were held on 11 December 1976. (See the 1976 *Year Book* for terms applying prior to 1972.)

Elections for the House of Assembly

Elections for the House of Assembly are conducted under a system which can be classified as proportional representation by the single transferable vote (commonly known as the Hare-Clark system).

The essential features of the system are as follows:

- (i) For an elector to cast a valid vote, he must express at least seven preferences.
- (ii) Party groups are identified on ballot papers, with ungrouped candidates listed together on the right of the ballot paper. Candidates' positions within groups are determined by ballot.
- (iii) To secure election, candidates must secure a quota in accordance with the Droop formula (i.e. the total first-preference votes in the constituency divided by eight, plus one vote).
- (iv) Should a candidate secure an exact quota on first preferences, his voting papers are set aside as finally dealt with.
- (v) If the first successful candidate secures a surplus above the quota, then all his voting papers are re-examined to determine which candidates should secure the second preferences.
- (vi) The second preferences are first adjusted by multiplying them by a fraction called the transfer value. The transfer value is calculated by dividing the successful candidate's surplus first-preference votes by his total first preferences. The second-preference votes, adjusted in this way, are now transferred to other candidates.
- (vii) When repetition of the above process results in a position where no further candidates can reach a quota, the candidate who is lowest on the poll is excluded and the preferences shown on his voting papers transferred to the remaining candidates.

The above processes are repeated until seven candidates have been elected. As might be expected, the counting of votes, calculation of transfer values and the transferring of votes are time-consuming operations and a week may elapse before the declaration of a poll.

Advantages of the Hare-Clark System: The major advantage claimed for the system is that the composition of the House of Assembly tends to faithfully reflect the wishes of the electors viewed on a state basis, and that a party with a minority of first preferences is most unlikely to obtain a majority of seats, as sometimes occurs in systems with single-member constituencies. By way of example, South Australia, using single-member electorates has sometimes been governed by parties receiving a minority of votes but a majority of seats; other Australian states have had similar experiences.

The House of Assembly elections held on 11 December 1976 resulted in the re-election of the Neilson-led Labor Government. The Government's majority was reduced from seven seats to one, with the A.L.P. holding 18 seats and the Liberal Party 17. Two ministers in the previous administration lost their seats while 13 new members were elected. For the whole State, first preference votes cast, by party, were as follows: A.L.P., 123 386 (50.48%); Liberal Party, 104 613 (42.80%); U.T.G., 5 183 (2.12%); Workers Party, 524 (0.21%); Socialist Workers Party, 123 (0.05%); ungrouped, 1 301 (0.53%); informal, 9 294 (3.80%); total, 244 424 (100.00%).

The next table shows the results of House of Assembly elections by parties from 1956:

Representation of Parties for the Whole State, 1956-1976

House of Assembly

Election Year	Labor		Liberal		Other (a)	
	Proportionate share (b)	Seats won	Proportionate share (b)	Seats won	Proportionate share (b)	Seats won
1956.....	15.08	15	13.08	15	1.84	—
1959 (c).....	15.58	17	14.37	16	5.05	2
1964.....	17.97	19	13.47	16	3.56	—
1969.....	15.91	17	14.68	17	4.41	1
1972.....	19.22	21	13.43	14	2.35	—
1976.....	18.37	18	15.57	17	1.06	—

(a) Independents and minority parties.

(b) State treated as single electorate and proportionate share of seats calculated on basis of first preference votes cast for parties.

(c) 35 members elected as from 1959.

Votes Recorded at Assembly Elections

Voting in general elections since 1956 is shown in the following table:

House of Assembly Elections Since 1956

Year of election	Electors on roll	Votes recorded		Informal votes	
		Number	As percentage of enrolled electors	Number	Percentage of total votes recorded
1956.....	174 632	166 293	95.2	6 968	4.2
1959.....	180 344	170 559	94.6	9 816	5.8
1964.....	193 418	184 571	95.5	7 980	4.3
1969.....	210 268	198 571	94.4	9 248	4.7
1972.....	216 846	205 803	94.9	7 533	3.7
1976.....	258 550	244 424	94.5	9 294	3.8

The percentage of informal votes in the previous table is not particularly high, even though the voting papers for six or seven-member electorates are necessarily more complicated than those for single-member electorates. At elections prior to 1976 voters were required to mark at least three candidates in order of preference. However, an amendment to

the *Electoral Act* made prior to that election required voters to mark at least seven candidates in order of preference. This change has had no obvious effect on the number of informal votes cast.

Constituencies of House of Assembly

The five constituencies for the House of Assembly are identified with the five electoral divisions electing members to the Federal House of Representatives. The next table and map show composition and extent of each electorate. The map shows new electoral boundaries that were adopted in November 1977 following an electoral redistribution for the House of Representatives.

House of Assembly: Enrolments by Electorate at 30 June

Electorate	1972	1973 (a)	1974	1975	1976	1977
Bass	41 486	42 949	46 843	46 727	47 338	48 458
Braddon	46 541	48 407	51 685	52 652	54 500	55 511
Denison	45 374	47 505	52 192	50 516	52 278	51 453
Franklin	42 119	44 782	49 202	49 470	50 900	53 063
Wilmot	43 360	45 040	48 732	49 697	51 264	53 524
Total	218 880	228 683	248 654	249 062	256 280	262 009

(a) Voting age lowered to 18 years in mid-1973.

By-Elections

In the case of a vacancy occurring in the House of Assembly, there is provision for the Chief Electoral Officer to publicly invite nominations from candidates who were unsuccessful at the last general election in the constituency which elected the vacating member. If one nomination only is received the consenting candidate is declared elected and the Governor notified to this effect.

If more than one such nomination is received, the Chief Electoral Officer is required to examine the voting papers counted for the vacating member at the last general election. In the simple case—where the vacating member obtained a surplus of first preference votes above the quota—this can be confined to voting papers expressing that first preference. In the more difficult case—where the vacating member did not obtain a quota on first choices—it is necessary to take into account not only original first-choice papers but also all voting papers representing votes transferred to the vacating member.

The vacating member's voting papers, as defined above, are examined and all his votes are transferred to the consenting candidates according to the preferences expressed thereon. Second preferences derived from first-choice votes of the vacating member have a transfer value of one, but from votes he obtained by transfer, only the value at which he obtained them. For the purpose of the count, first-choice votes received by the consenting candidates at the general election are not relevant—the selection is based on preferences as revealed by the voting papers of the vacating member.

When the number of votes in favour of each consenting candidate has been ascertained, the final selection is by the method of the absolute majority through the alternative vote. If no nominations are received from candidates unsuccessful at the last general election, then an election is held to fill the vacancy.

Dissolution of House of Assembly

The Governor may dissolve the House of Assembly whenever he considers it desirable but he has no power to dissolve the Legislative Council. In effect then, the Legislative Council is a perpetual body except that approximately one-sixth of its seats fall vacant annually. As there is no provision for a double dissolution the Legislative Council, by rejection of a Supply Bill, can force the House of Assembly to seek a dissolution without itself needing to face the electorate. This last occurred in 1948.

In practice, the Governor considers dissolving the House of Assembly only when requested to do so by his ministers. In recent years the House of Assembly has been dissolved three times; in 1950, 1956 and again in 1972.

House of Assembly, Members

The following table shows members of the House of Assembly and their party allegiance as at 14 July 1978:

Members of the House of Assembly as at 14 July 1978

Electoral Division	Member's name	Party affiliation
Bass	Barnard, The Hon. Michael Thomas Claude Beattie, Eric William Bushby, Maxwell Holmes Holgate, The Hon. Harold Norman James, Gillian Hilma Mooney, Laurence James Robson, Neil Maxwell	A.L.P. Liberal Liberal A.L.P. A.L.P. Liberal Liberal
Braddon	Bonney, Raymond Claude Chisholm, The Hon. Geoffrey Donald Cornish, Ronald Coughlan, John Anthony (a) Davies, The Hon. Ronald Glen (b) Field, Michael Walter Groom, Francis Roger	Liberal A.L.P. Liberal A.L.P. A.L.P. A.L.P. Liberal
Denison	Amos, Dr Julian John Baker, Robert Wilfred Batt, The Hon. Neil Leonard Charles (c) Bingham, The Hon. Eardley Max (d) Green, John Edward Mather, Robert Robinson, Maxwell Keith	A.L.P. Liberal A.L.P. Liberal A.L.P. Liberal Liberal
Franklin	Barnard, The Hon. Eric Walter Beattie, John Maxwell Gilmore, Stephen Bernard Lowe, The Hon. Douglas Ackley (e) McKinnon, William Gillies Pearsall, Geoffrey Allan Sherry, Raymond Henry	A.L.P. Liberal Liberal A.L.P. A.L.P. Liberal A.L.P.
Wilmot	Aulich, Terrance Gordon Baldock, The Hon. Darrel John Braid, Ian Maxwell Gray, Robin Trevor Lohrey, Andrew Barnard Page, Graeme Reginald Polley, The Hon. Michael Ronald	A.L.P. A.L.P. Liberal Liberal A.L.P. Liberal A.L.P.

(a) Chairman of Committees.

(b) Speaker.

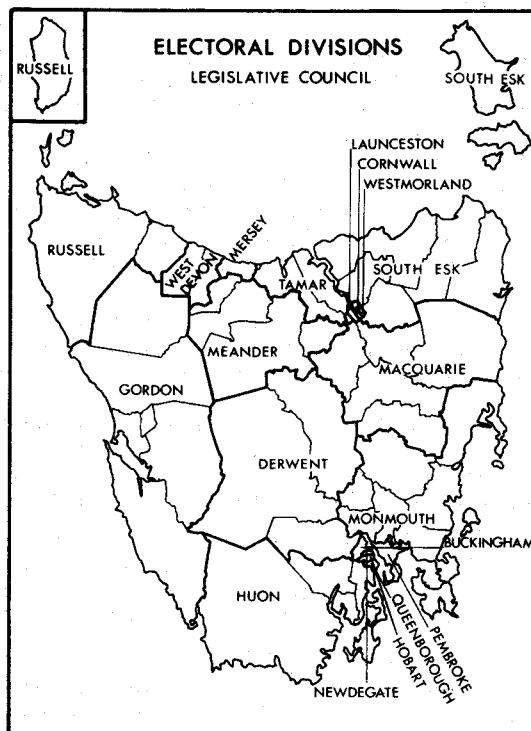
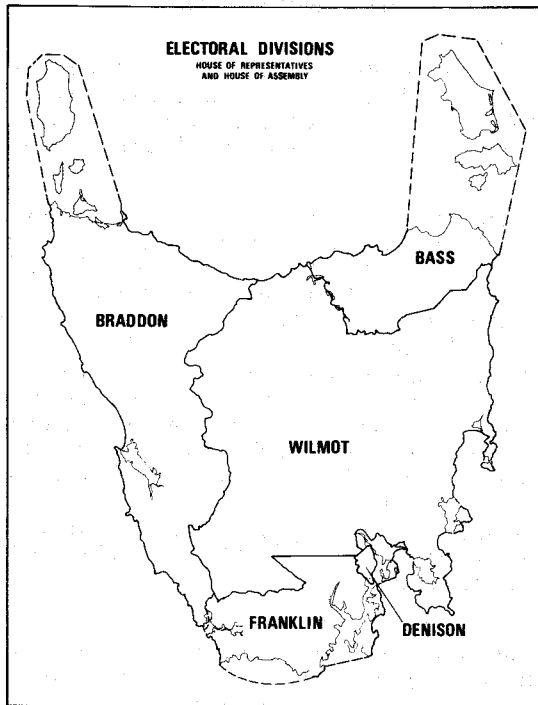
(c) Deputy Premier.

(d) Leader of the Opposition.

(e) Premier.

Sessions of Parliament

Parliament is required to sit every year and, having risen, must sit again before 12 months have elapsed. When the House of Assembly is dissolved and a general election held, the Governor is required to call Parliament together within 90 days of the dissolution, subject to a discretionary extension of a further 30 days.



The Legislative Council

Annual Fractional Elections

For the purpose of electing members of the Legislative Council, the State is divided into 19 single-member constituencies. Each member, when elected, holds office for six years and Council elections are held every year to elect three members; every sixth year four members are elected. There are no general elections for the Legislative Council.

Preferential Voting

The order of candidates' names appearing on the voting papers is determined by ballot and candidates are not grouped to show party allegiance as in voting papers for the House of Assembly. (Prior to a 1973 amendment to the *Electoral Act* 1907, candidates' names appeared on ballot papers in alphabetical order.) If there are two candidates, the voter need only vote for one. If there are three or more candidates, the voter must indicate at least three preferences to record a valid vote.

If any candidate secures first-preference votes exceeding half the total first preferences, he is declared elected. If no candidate satisfies this condition, then the candidate with the least votes is excluded and the second preferences shown on his voting papers are transferred to other candidates, the transfer value of each such second preference being equal to one. If no candidate then has the required majority, the process of exclusion is repeated until such time as one candidate secures the majority.

The method of counting is identical with that used in elections for the federal House of Representatives and is termed preferential. The full description is election by absolute majority through use of the alternative vote.

By-Elections

In the case of a vacancy occurring in the Legislative Council, a writ is issued directing that an election be held to fill the vacancy. There is no provision for a re-count of voting papers of the vacating member as for the House of Assembly.

Status of Legislative Council

The Legislative Council has the tradition of being a non-party house; in 1978 the composition of the house was 17 independents and two Labor Party representatives. The leader for the Government in the Legislative Council cannot rely upon a vote taken on party lines to ensure the passage of any government bill. It is the ability to command a majority in the House of Assembly which gives a party the right to form the government of the day and which ensures the passage of government legislation through the lower house; no such certainty exists in the passage of bills through the upper house.

Following conflict between the two Houses of Parliament over a money bill during 1924 and 1925, the *Constitutional Amendment Act* 1926 was passed. This Act defined the relations between the two Houses, especially with regard to the passing of money bills. The following current principles are found in the Act:

- (i) the Legislative Council retains the right to reject any bill, including a money bill;
- (ii) the Council is specifically prevented from amending bills to raise revenue for the ordinary annual services of the Government and bills imposing land and income tax;
- (iii) it can suggest to the House of Assembly that amendments be made but the adoption or rejection of such amendments is at the discretion of the Assembly; and
- (iv) the operation of such bills is restricted to a period of one year.

Apart from the above specific exceptions, the Council retains the right to amend money bills, e.g. those dealing with loan funds or probate. The House of Assembly is given the sole right to initiate bills for the raising of revenue and the imposition of taxes. Finally, the powers of the two houses are declared equal in all matters except for these specific exceptions.

Boundaries, Legislative Council Divisions

Legislative Council electoral division boundaries, which are shown on an earlier map, have remained unchanged since September 1968. The following table shows the number of electors in each division as at 30 June for recent years:

Legislative Council: Enrolments by Electorate at 30 June

Division (a)	1972	1973 (b)	1974 (b)	1975	1976	1977
Buckingham (H)	10 806	11 548	15 446	14 791	14 940	14 571
Cornwall (L)	12 231	12 049	12 186	12 534	11 908	11 961
Derwent (R)	6 947	7 388	7 319	7 081	6 985	7 067
Gordon (S)	5 526	5 305	5 391	5 586	6 304	6 044
Hobart (H)	13 146	13 116	13 860	13 932	13 897	13 554
Huon (R)	9 821	9 820	10 590	11 035	11 444	11 507
Launceston (L)	11 237	10 960	11 537	11 416	14 284	14 378
Macquarie (R)	5 804	6 399	7 655	7 380	7 433	7 607
Meander (R)	7 901	7 615	7 639	7 996	7 938	8 694
Mersey (DU)	15 047	14 889	15 467	15 495	15 551	16 018
Monmouth (R)	6 968	7 342	7 952	10 019	10 422	10 653
Newdegate (H)	12 534	12 699	14 999	16 761	17 259	16 635
Pembroke (H)	18 926	18 604	19 283	19 363	19 607	24 663
Queenborough (H)	11 265	10 879	12 933	12 712	12 694	13 523
Russell (R)	9 420	9 503	9 973	12 137	12 253	12 000
South Esk (R)	8 512	9 121	10 463	10 162	10 206	10 461
Tamar (R)	6 822	8 551	8 890	8 935	9 080	8 932
West Devon (BP)	13 013	12 757	13 044	12 990	13 271	14 575
Westmorland (L)	9 736	11 153	10 935	11 045	11 385	11 346
Total	195 662	199 698	215 562	221 370	226 861	234 189

(a) (H) = Hobart and suburban; (L) = Launceston and suburban; (BP) = Burnie and Penguin municipalities; (DU) = Parts of Devonport and Ulverstone municipalities; (R) = rural; (S) = special.

(b) Voting age lowered to 18 in mid-1973.

Legislative Council Members

The next table shows members of the Legislative Council (following the elections held in three Divisions on 27 May 1978 at which the member for Huon was returned unopposed), the electoral division which they represent and the year in which each will retire from the Council:

Members of the Legislative Council, June 1978

Electoral Division	Member's name	Year of retirement
Buckingham	Lowrie, The Hon. Kenneth Francis	1980
Cornwall	Le Fevre, The Hon. Vernon McKenzie	1984
Derwent	Dixon, the Hon. Joseph Henry (a)	1979
Gordon	Broadby, The Hon. Albert James	1982
Hobart	Venn, The Hon. Kathleen J. (b)	1982
Huon	Hodgman, The Hon. Peter	1984
Launceston	Shipp, The Hon. Raymond William	1982
Macquarie	Shaw, The Hon. George Arthur	1980
Meander	Coates, The Hon. Jeffrey Allan	1983
Mersey	Braid, The Hon. Henry William	1984
Monmouth	Bisdee, The Hon. Louis Fenn	1981
Newdegate	Miller, The Hon. Brian Kirkwall (b) (c)	1981
Pembroke	McKay, The Hon. Peter Charles	1983
Queenborough	Hodgman, The Hon. William Clark	1983
Russell	Fenton, The Hon. Charles Balfour Marcus (d)	1981
South Esk	Cairns, The Hon. Lloyd Horton, OBE	1980
Tamar	Hitchcock, The Hon. Daniel	1979
West Devon	Young, The Hon. William Thompson	1983
Westmorland	Gregory, The Hon. Oliver Harold	1979

(a) Chairman of Committees.

(b) Endorsed by the Australian Labor Party; other members are independents.

(c) Leader for the Government in the Legislative Council; Attorney-General and Minister for Consumer and Ethnic Affairs.

(d) President.

Qualifications of Electors and Members

Qualifications of Electors, State Elections

An elector for both the House of Assembly and the Legislative Council is any person, aged at least 18 years, male or female, who has lived in the State for six months continuously, who is natural-born or a naturalised subject of the Queen and whose name is on the electoral roll for an electoral division. (Legislation reducing the voting age to 18 years passed both Houses of Parliament in mid-1973.) Voting has been compulsory since the *Electoral Act* 1928. Special qualifications which had previously been required for electors of the Legislative Council were abolished on 1 July 1969 following amendments to the *Constitution Act* 1934 and the *Electoral Act* 1907.

Qualifications of Members, State Parliament

House of Assembly: To be eligible for election as a member of the House of Assembly, a candidate must comply with the following conditions: he must either be an elector or be qualified to be an elector for the House of Assembly and resident in Tasmania for five years at any one time or resident for two years immediately preceding the election.

Legislative Council: A candidate for the Legislative Council must be an elector or have the qualifications of an elector for the Council; in addition he must meet the residential restrictions imposed on candidates for the House of Assembly.

Persons of unsound mind or in prison under any conviction are barred from voting at elections for either house or from being elected to either house. No person shall be a member of both houses at the one time.

Salaries of Members of Parliament

Under provisions of the *Parliamentary Salaries and Allowances Act* 1973, a basic rate of pay to members is calculated annually. This basic rate is set as the 'interstate average' of the rates payable to ordinary 'back bench' members of the Legislative Assemblies of New South Wales, Victoria, Queensland and Western Australia and the House of Assembly of South Australia. Calculation of the interstate average is the responsibility of the 'salaries committee' comprising the Government Statistician, Clerk of the Legislative Council and Clerk of the House of Assembly. The committee is required to meet as soon as practicable after 15 June each year and make the necessary calculation. A report on the method adopted to make the calculation and the interstate average is then forwarded to the Auditor-General who may accept the calculation or himself make a calculation replacing that of the salaries committee. Having either accepted the salaries committee's calculation or substituted one of his own, the Auditor-General is required to publish in the *Government Gazette* the appropriate interstate average which then becomes the basic salary for payment of parliamentary salaries and allowances. The basic rate applicable from 1 July 1978 was \$22 464.

Additional amounts, as shown in the next table, are payable to the Premier, Deputy Premier, Ministers of the Crown, Leader of the Opposition and other officers of Parliament. The extra salaries payable are all related to the basic salary.

Special Rates Payable in Addition to the Basic Salary (a)
(Per Cent)

Particulars	Additional salary payable as proportion of basic salary (b)	Particulars	Additional salary payable as proportion of basic salary (b)
Cabinet—		House of Assembly—	
Premier	125	Speaker	33½
Deputy Premier	85	Chairman of Committees	20
Ministerial office	70	Leader of the Opposition	70
Legislative Council—		Deputy Leader of the Opposition	17
President	33½	Government Whip	6
Leader of the Government	70	Opposition Whip	6
Chairman of Committees	20		
Deputy Leader of the Government	11		

(a) The basic salary was set at \$20 625 in 1977 and raised to \$22 464 from July 1978.

(b) Salary in excess of basic rate (e.g. the Premier receives basic rate + 1.25 × basic rate).

Allowances Payable to Members: Electoral allowances, and entertainment allowances are calculated as a proportion of the base rate. Travel allowances are related to rates payable to permanent heads of State Government Departments. The next table shows the electoral allowances payable as a proportion of the basic salary:

Electoral Allowances Payable as a Proportion of the Basic Salary (a)
(Per Cent)

Electoral division	Proportion of basic salary payable	Electoral division	Proportion of basic salary payable
Legislative Council—		Legislative Council— <i>continued</i>	
Buckingham.....	13	Queenborough.....	11
Cornwall.....	12	Russell.....	26
Derwent.....	18½	South Esk.....	26
Gordon.....	26	Tamar.....	18½
Hobart.....	11	West Devon.....	17
Huon.....	18½	Westmorland.....	14
Launceston.....	12	House of Assembly—	
Macquarie.....	20	Bass.....	26
Meander.....	22	Braddon.....	30
Mersey.....	17	Denison.....	15
Monmouth.....	24	Franklin.....	21
Newdegate.....	11	Wilmot.....	35
Pembroke.....	13		

(a) The basic salary was set at \$22 464 in July 1978.

The Present System of Government

The system of responsible government in Tasmania requires that the executive power of the State shall be exercised by the Cabinet; in exercising this power, the ministers of the Cabinet are held responsible for the actions and administration of government departments and other governmental authorities which have been created for three basic purposes: (i) to put into practice the laws made by parliament; (ii) to give effect to the decisions of the ministry; and (iii) to advise the ministry on matters of policy.

The next section lists the departments and authorities under the various ministers but the allocation of responsibility is subject to change and Cabinet has the power to vary it at any time. The Cabinet portfolios and responsibilities set out below are those allocated by the Premier in a reshuffle made on 14 July 1978. A table in the earlier section 'The Cabinet and Executive Government' lists the names of ministers holding the various portfolios.

Premier and Minister for Industrial Relations and Manpower Planning

Premier's Dept	Apprenticeship Commission
Audit Dept	Building Industry Contractors Registration Board
Electoral Dept	Coal Mining Industry Long Service Leave Trust
Tasmanian Film Corporation	Miners Pension Board
Dept of Labour and Industry	Plumbers Registration Board
Public Service Board Dept	Workers (Occupational Diseases) Relief Fund Board
Anzac Day Trust	
Hydro-Electric Commission	

Deputy-Premier, Treasurer and Minister for Economic Planning and Development

Treasury Dept	Forestry Commission
Dept of Planning and Development	

Attorney-General and Minister for Consumer and Ethnic Affairs

Attorney-General's Dept	Rural Fires Board
Parliamentary Counsel's Dept	State Emergency Service
Prisons Dept	State Fire Authority
Public Trust Office	Supreme Court and Sheriff's Dept
Registrar-General's Dept	Consumer Affairs Council

Minister for Tourism and Minister for Health

Dept of Tourism
Licensing Commission
Dept of Health Services
Mental Health Services Commission
Alcohol and Drug Dependency Board
Dental Board of Tasmania

Interim Ambulance Authority
Nurses' Registration Board
Pharmacy Board of Tasmania
Physiotherapists Registration Board
Radiographers Registration Board

Minister for Primary Industry and Minister for Police and Road Safety

Dept of Agriculture
Agricultural Bank of Tasmania
Dairy Industry Authority
Egg Marketing Board
Fisheries Development Authority
Inland Fisheries Commission
King Island Abattoirs Board

Potato Marketing Board
Soft Fruit Industry Board
Stanley Cool Stores Board
Tasmanian Apple and Pear Marketing Authority
Tasmanian Grain Elevators Board
Tasmanian Herd Improvement Organisation
Police Department

Minister for Education, Recreation and the Arts

Education Dept
State Library of Tasmania
Council of Advanced Education
Racing and Gaming Commission
Racing Trust
Royal Tasmanian Botanical Gardens

Tasmanian Arts Advisory Board
Tasmanian Museum and Art Gallery
Theatre Royal Board
Totalizator Agency Board
University of Tasmania

Minister for Housing and Construction

Dept of Housing and Construction
Lands Dept

Supply and Tender Dept

Minister for Main Roads and Transport and Minister for Municipal Planning

Dept of Main Roads
Metropolitan Transport Trust

Transport Commission
Division of Municipal Planning

Minister for Community Welfare and Child Care and Minister for Mines

Dept of Social Welfare
Government Printing Office
Kennerley Children's Homes Board

Royal Tasmanian Society for the Blind and Deaf
Tasmanian Government Insurance Office
Mines Dept

Minister for the Environment, Minister for National Parks and Wildlife and Minister for Water Resources

Metropolitan Water Board
North-West Regional Water Authority
Rivers and Water Supply Commission

Dept of the Environment
National Parks and Wildlife Service
National Estates

ACTS OF STATE PARLIAMENT**Summary of State Acts, 1977**

The examples below illustrate the interpretation of the notations used in the following list of Acts:

(A 1952)—An Act to amend an Act of the same title passed in 1952.

(A Audit Act 1952)—An Act to amend an Act of this title passed in 1952.

(R 1952)—An Act to repeal an Act of the same title passed in 1952.

(R Audit Act 1952)—An Act to repeal an Act of this title passed in 1952.

(P 1952)—An Act to be incorporated and to be read as one with the Principal Act passed in 1952.

(P Audit Act 1952)—An Act to be incorporated and to be read as one with the Principal Act of this title passed in 1952.

(RS 1952)—An Act to repeal an Act of the same title passed in 1952 and to substitute new legislation.

(RS Audit Act 1952)—An Act to repeal an Act of this title passed in 1952 and to substitute new legislation.

State Acts, 1977—

Number	Short title and summary
1	Financial Agreement (Sinking Fund Contributions) (A Transport Act 1938) (A Metropolitan Transport Act 1954) (A West Tamar Water Act 1960) (A North Esk Regional Water Act 1960) (A Southern Regional Water Act 1960) (A Straits Islands Abattoirs Act 1950) (A Water Act 1957)—amendments relating to contributions payable towards redemption of certain loans.
2	Evidence (A 1910)—made provision for tape recording legal proceedings and receiving tape recordings as <i>prima facie</i> evidence.
3	Legal Practitioners (A 1959)—admission of practitioners from other states.
4	Herd Improvement—constitution of Herd Improvement Board of Tasmania to control and regulate herd improvement.
5	Statute Law Revision (A Dairy Industry Act 1976) (A Libraries Act 1975) (A Licensing Act 1976) (A Stock Act 1932) (A Trustee (Insured Housing Loans) Act 1970)—repeal of a total of 803 Acts subject to specified continuing limited applications of their provisions.
6	Hobart Gas Company—provided for cessation of the supply of reticulated gas by the Hobart Gas Company and for the alleviation of hardship (both industrial and domestic) associated with conversion or replacement of equipment.
7	Apples and Pears Marketing—establishment of Apple and Pear Marketing Authority to market the 1977 crop of apples and pears on the overseas export market and provide payment to growers.
8	Loan Fund Supply—provision of \$44 000 000 in Loan Funds for the 1977-78 financial year.
9	Mental Health Services (A 1967) (A Public Service Act 1973)—administrative details relating to chief executive officers on the Mental Health Services Commission.
10	Local Government (A 1962)—provided for establishment of the Planning Appeal Board to hear appeals by persons adversely affected by town and country planning.
11	Roads and Jetties (A 1935) (A Local Government Act 1962)—application of State Highways Trust Fund moneys.
12	Consolidated Revenue Fund Supply 1977-78—provision of \$112 225 000 in Consolidated Revenue Funds for the 1977-78 financial year.
13	Tourism and Recreational Development—establishment of the Tourism and Recreational Development Fund for the promotion and development of tourist facilities in the State.
14	Public Trust Office (A 1930)—amendment to administration and powers of Public Trustee.
15	Tourism (RS Tourism Development Act 1970) (A Defacement of Property Act 1898) (A Local Government Act 1962)—revised provisions for the development and promotion of tourism in Tasmania.
16	Consolidated Revenue Fund Appropriation (No. 4) 1976-77—granted to dairy factories the sum of \$265 000 for repayment of loans under the State Advances Act 1935.
17	State Employees (Long Service Leave) (A 1950)—changes to computation of long service leave for those who were student teachers before 1970.
18	Sewers and Drains (A 1954)—prescribed minimum standards for drains and sewers which may be controlled by local authorities.
19	Prisons (R 1868) (R 1908)—establishment and control of prisons, custody and treatment of prisoners and other related matters.
20	Home Purchase Loans Guarantees (A Homes Act 1935)—provided for the Treasurer to guarantee loans made to finance the provision of homes.
21	St John's Hospital Loan Guarantee—authorised the Treasurer to guarantee the repayment of a loan to assist in the construction of a new wing at the hospital.
22	Anglican Church of Australia Constitution (A Church of England Constitution Act 1973)—passed in consequence of the name change of the Church of England in Australia.
23	Lands Resumption (A 1957)—provided for special arbitrators to assess compensation in respect of land acquired by the Government.
24	Public Service (A 1973)—all appointments in or to the Public Service to be made by the Governor upon the recommendation of the Board except in the case of appointments of permanent heads of departments.
25	Auctioneers and Estate Agents Act (A 1959)—general revision of Act.
26	Hobart Corporation (A 1963)—specified voting qualifications for citizens; Mayor to be elected biennially; and rotational retirement of aldermen.
27	Launceston Corporation (A 1963)—qualified citizens and general election matters.
28	Hospitals (A 1918)—general administrative details.
29	Housing and Construction (A Homes Act 1935) (A Homes (Old Age Pensioners) Act 1940) (A Housing Agreement Act 1956, 1961, 1966, 1973) (A State Advances Act 1935) (Substandard Housing Control Act 1973)—creation of the Department of Housing and Construction and the appointment of a Director-General of Housing and Construction. (This Department was previously part of the former Public Works Department.)

State Acts, 1977—continued

Number	Short title and summary
30	Public Works Construction (A 1880) (A Local Government Act 1962) (A Public Service Act 1973) (A Roads and Jetties Act 1935)—revised functions of the Director of Public Works.
31	Stamp Duties (A 1931)—provision for the commissioner of stamp duties to make loans in connection with the payment of duty relating to the purchases of first homes.
32	Rural Adjustment—provisions for a scheme to assist persons engaged in rural industries.
33	Police Regulation (A 1898)—appointment of two Assistant Commissioners.
34	Tasmanian Film Corporation—provided for the establishment of a department of this name and defined its powers and functions.
35	Fire Brigades (A 1945)—slightly broadened financial power of the Commission.
36	State Employees (Long Service Leave) (No. 2) (A 1950)—right of employee to retire giving seven days notice.
37	Local Government Act (No. 2) (A 1962) (A Water Act 1957) (Marine Act 1976)—general revision of local government election procedures and rate payments, plus other miscellaneous amendments.
38	Uniting Church in Australia—facilitated the union of various Christian churches into a single church.
39	Carbide Industry Development (A 1976)—provided granting of a loan for the purchase of anthracite coal.
40	Public Service (No. 2) (A 1973)—administrative details.
41	State Employees (Long Service Leave) (No. 3) (A 1950)—amendments in relation to length of service by Government scholarship holders before 1 January 1970.
42	Education (Recreation) (A Education Act 1932)—provided for the cessation of the National Fitness Council and transfer of its operations to the Teaching Service.
43	Queen Alexandra Hospital Lands Resumption—provided for the land on which the Queen Alexandra Hospital is situated to be vested in the Crown and for regulation of the land's use.
44	Public Trust Office (No. 2) (A 1930)—Public Trustee to distribute estate when no claims received after advertisement.
45	Hobart Corporation (No. 2)—notice of at least five days prior to closing off Salamanca Place for a Saturday Market required.
46	Public Health (A 1962)—regulations specified to apply to establishments where tattooing, ear-piercing, acupuncture and any cutting or piercing of human skin is performed.
47	Substandard Housing Control (A 1973) (A 1975)—houses declared substandard not to be relet without the consent of the Director of Housing and Construction.
48	Alcohol and Drug Dependency (A 1968)—revision to constitution of the Alcohol and Drug Dependency Board and Committees of the Board.
49	Savings Banks (A 1848)—maximum amount of money that savings banks can donate to charities to be determined by the Treasurer.
50	Supreme Court (A Supreme Court Civil Procedures Act 1932) (A Criminal Code Act 1924) (A 1887)—altered the manner in which sittings of the Supreme Courts and its judges are fixed.
51	Road Safety (Alcohol and Drugs) (A 1970)—minor changes to laws concerning excessive concentrations of alcohol in the blood.
52	Statute Law Revision (A Hobart Corporation Act 1977) (A Launceston Corporation Act 1977) (A Local Government Act 1977) (A Local Government Act (No. 2) 1977) (Statute Law Revision Act 1977)—minor revisions to these Acts.
53	North Esk Regional Water (A 1960)—provided for the increased cost of completion of water supply works to \$14 million.
54	Administration and Probate (A 1935)—minor amendment.
55	Hydro-Electric Commission (Power Development) (A 1967)—increased allocation of funds to meet construction expenses.
56	Plumbers' Registration (A 1951)—minor amendments to Registration Board.
57	Motor Accident (Liabilities and Compensation) (A 1973) (R Motor Accidents (Liabilities and Compensation) (Temporary Provisions) Act 1974) minor amendments.
58	Traffic (A 1925) (A Criminal Code)—minor amendments to restricted licence provisions and increased penalties in some circumstances.
59	Homes (A 1935)—amendments relating to transfer of titles and sales of land for home building.
60	Industrial Safety, Health, and Welfare Act (R Scaffolding Act 1960) (R Inspection of Machinery Act 1960, 1966, 1973, (No. 2) 1973) (R Factories, Shops and Offices Act 1965, 1966, 1967, 1973)—provision relating to the safety, health and welfare of persons employed, engaged in, or affected by industry and to the safety of persons using amusement devices and public stands.
61	Fisheries Development (A Fisheries Act 1959)—provided for establishment of the Tasmanian Fisheries Development Authority and for promotion and development of fisheries in the State.

State Acts, 1977—continued

Number	Short title and summary
62	National Parks and Wildlife (A 1970)—general amendments to the Act.
63	Ida Bay Railway—granted a lease of reserved land to the Railway's operators for use in maintaining and working the Ida Bay Railway.
64	Midway Point Improvement (A 1975)—provided for the Municipality of Sorell to borrow up to \$3.5 million for improvements.
65	Environment Protection (A 1973)—general amendments to pollution regulations.
66	Radiation Control—provisions relating to the handling of radioactive materials and electronic production of radiation.
67	Industrial Relations (A 1975)—outlined appeal procedures to apply before the Industrial Relations Board.
68	Railways (Transfer to Commonwealth) (Retirement Benefits)—provisions relating to retirement and other benefits payable to employees and former employees of the railways.
69	Sale of Hazardous Goods—provided for establishment of the Products Safety Committee to control the sale of hazardous goods.
70	Poultry Industry (Broiler Raising) Loan Guarantee—authorised the Treasurer to guarantee the repayment of loans from the Agricultural Bank of Tasmania to producers of broiler chickens.
71	Nurses' Registration Act (A 1952)—revised qualifications and conditions of registration.
72	Local Government (Planning) Act (A Local Government Act 1962)—provided for the representation of marine boards on master planning authorities.
73	Restricted Publications (A 1974)—banned publications containing sexual and other activities of children, and publications depicting bestiality.
74	Carbide Development Act (No. 2) (A 1976)—guaranteed repayment of principal moneys for Electrona Carbide Industries Pty Ltd.
75	Consolidated Revenue Fund Appropriation 1977-78—provision of \$223 377 959 from Consolidated Revenue Fund for 1977-78.
76	Industries Assistance—provided for the Treasurer to render financial assistance to certain industries.
77	Loan Fund Appropriation 1977-78—authorisation and application of \$79 153 999 from the Loan Fund in addition to issue by the Loan Fund Supply Act (\$44 million).
78	Pay Roll Tax (A 1971)—minor amendment relating to refunds and rebates of pay roll tax.
79	Hobart Gas Company (No. 2) (A 1977)—minor amendment to Act passed earlier in year.
80	Hydro-Electric Commission (Contributions) (A 1971)—minor amendments.
81	Tourism and Recreational Development (No. 2) (A 1977)—minor amendment to the Treasurer's allocation of funds.
82	Constitution (Minister of the Crown) (A Constitution Act 1934) (R Ministers of the Crown Act 1923) (A Parliamentary Salaries and Allowances Act 1973)—Ministers of the Crown limited to a maximum of 10; other amendments concerning their appointment and special provisions relating to the Attorney-General.
83	Consolidated Revenue Fund Supplementary Appropriation 1976-77—appropriation of a further \$20 090 860 from Consolidated Revenue for the 1976-77 financial year.
84	Land Tax—set rates of land tax to apply for the 1977-78 financial year.
85	Land and Income Tax (A 1910)—provided for a home owner's rebate in respect of land tax.
86	Motor Vehicles Tax (A 1917)—increased levy payable for certain vehicles.
87	Fire Brigades (No. 2)—provided for the establishment of the State Fire Authority and abolition of the Fire Brigades Commission.
88	Ambulance—provided for abolition of the Ambulance Commission of Tasmania and the transfer of functions to the Interim Ambulance Authority.
89	Pay Roll Tax (Supplemental Provisions) (A 1976)—reduction in pay roll tax payable by some smaller businesses.
90	Rural Fires (A 1967)—small administrative amendments.
91	Roads and Jetties (No. 2) (A 1935)—motor taxation revenue to go into Consolidated Revenue.
92	Traffic (No. 2) (A 1925)—increased costs for issue and renewal of drivers' licences.
93	Apple Industry (Assistance)—provision for the Apple and Pear Marketing Authority to make grants in respect of the production and export of the 1977 apple crop.
94	Licensing (A 1976)—minor amendments to the Constitution of the Licensing Board and the payment of licence fees.
95	Motor Accidents (Liabilities and Compensation) (No. 2) (A 1973)—minor amendments.
96	Hydro-Electric Commission (Power Development) (No. 2) (A 1974)—provided for Government funding of the increased expenses for installing a generating set.

State Acts, 1977—continued

Number	Short title and summary
97	Potato Industry—provided for establishment of the Potato Industry Authority of Tasmania to regulate, control, produce and dispose of potatoes grown in Tasmania.
98	Medical (A 1959)—amendments to the powers of the Medical Council.
99	Deceased Persons' Estate Duties (A 1931)—amendments relating to scale of duties.
100	Local Government (Rates and Charges Remissions) (R Pensioners' Rate Remissions Assistance Act 1974) (A Local Government Act 1962)—provided for the remission of the payment of rates and certain charges due to pensioners and for the granting of financial assistance to municipalities in respect of the remission of rates and certain charges to certain pensioners.
101	Industrial Relations (No. 2) (A 1975)—provisions relating to the appointment and functions of assistant deputy chairmen to the Industrial Boards.
102	Launceston Flood Protection (R 1960)—provisions to enable the city of Launceston to make by-laws and exercise certain powers with respect to flood protection.
103	State Employees (Long Service Leave) (No. 4) (A 1950)—minor amendments.
104	Racing and Gaming (A 1952)—general amendments to this Act.
105	Public Servants' Retiring and Death Allowances (A 1925)—minor amendments.
106	Retirement Benefits (A 1970, 1976)—amendments to provisions relating to the Retirement Benefits Fund.
107	Superannuation (A 1938, 1976)—minor amendments relating to Superannuation Fund.
108	Constitution (Assembly Divisions) (A 1934)—provided for changes to electoral boundaries of Divisions of the House of Assembly.
109	Apple and Pear Marketing Act (No. 2) (A 1977) (A Fruit Board Act 1934)—gave further functions to the Apple and Pear Marketing Authority including the taking over of the functions of the State Fruit Board.
110	Homes (Additional Borrowings) (A Homes Act 1935)—made provision for the Director-General to borrow on the security of his revenues up to \$10 million with the consent of the Governor.
111	St Vincent's Hospital Loan Guarantee—authorised the Treasurer to guarantee the repayment of loans for construction of a new wing at St Vincent's Hospital.
112	Builders Registration—provisions relating to the registration of builders and the establishment of the Building Industry Contractors Board.
113	Dairy Produce (A 1932)—changed the basis of payment for milk used in the manufacture of dairy products.
114	Fisheries (A 1959)—Inland Fisheries Commissioner given power to grant rights to take eels in specified inland waters during a specified period.
115	Local Government (Miscellaneous) (A Local Government Act 1962) (A Hobart Corporation Act 1977) (Launceston Corporation Act 1977)—amendments relating to the entitlement of certain electors to vote at municipal elections and to the payment of interest on overdue rates and repeal of the limit on rates that can be set by the Launceston Corporation.
116	Legal Assistance (First Home Buyers)—provided for Government assistance to meet legal costs incurred in buying a first home.
117	Forestry (A 1920)—provided for the establishment and set out functions of the Private Forestry Council.
118	Dairy Industry (A 1976)—amendments to functions of the Dairy Industry Advisory Board.
119	Railways (Transfer to Commonwealth) (Retirement Benefits) (No. 2) (A 1977)—minor amendments to Act passed earlier in year.
120	Local Government (Planning) (No. 2) (A Local Government Act 1962)—reformation of the Southern Metropolitan Planning Authority.
121	Wee Georgie Wood Steam Railway—authorised construction, maintenance and working of a tramway at Tullah.
122	Motor Accidents (Liabilities and Compensation) (A 1973)—minor amendments with regard to Motor Accidents Insurance Board and other matters.
123	Closer Settlement (A 1957)—minor amendments with regard to development leases.
124	Mental Health (A 1963) (A Criminal Code)—provided for the establishment of an institution for the accommodation and treatment of patients who, having become subject to criminal proceedings, need to be detained under conditions of special security.
125	Marine (A 1976)—amendments to the structure and some functions of the Marine Board of Devonport.

Further References

- Acts of the Parliament of Tasmania* (annual, Tasmanian Government Printer, Hobart)
Tasmanian Statutes 1826-1959 (Consolidated reprint) (Tasmanian Government Printer, Hobart, 1960-1967)
The Tasmanian Almanac (published annually by Mercury-Walch, Hobart)
TOWNSLEY, W. A. *The Government of Tasmania* (University of Queensland Press, 1976)

Chapter 4

LOCAL GOVERNMENT

GENERAL

Historical

Introduction

In Tasmania, the functions of local government are more restricted than in some other countries as the State Government takes direct responsibility for important services such as the police, education, housing, public transport, etc. This peculiarity is not confined to Tasmania and is encountered in the other Australian states, where central control is exercised over functions often delegated to local government authorities in overseas countries; the origin of this tendency probably lies in early colonial history when the continent was virtually empty but the apparatus of government existed at each of the new coastal settlements (Sydney, Hobart, Perth, Melbourne, Adelaide and Brisbane, in order of age). In the Australian situation strong central administrations came first. Local government was a much later growth, the initiative for its creation often coming from the central administration itself in the respective colonies.

The first division of Tasmania into local administrative districts occurred in 1827 when the Colony was split into nine police districts; each district was under the control of a magistrate whose functions were primarily disciplinary and connected with administering the convict system. From then, the development of local government in Tasmania followed three distinct phases as outlined below.

Hobart and Launceston

From 1835 to 1857 several acts were passed relating to the local government of Hobart and Launceston—Hobart Town was granted elected commissioners in 1846, and under an Act of 1852, both Hobart and Launceston were given elected municipal councils. In 1857 the City of Hobart was incorporated as was the Town of Launceston one year later. Launceston was proclaimed a city in 1888. For the next 76 years these were the only two cities in the State, but in 1964 the number was increased to three when Glenorchy was granted city status.

The form of local government in Hobart and Launceston is governed by separate corporation acts for each authority; in the case of Glenorchy, however, its operation as a city is provided for in the *Local Government Act 1962*.

Rest of State before 1906

The first step towards the creation of rural municipalities came with the *Rural Municipalities Act 1858*. Between 1860 and 1863, 16 municipalities had been proclaimed but the nine police districts were also retained under magisterial control. The Act of 1858 was repealed in 1865 and a new *Rural Municipalities Act* became law. The State was then divided into thirty municipal districts with defined boundaries. However, only 19 of these actually had councils. One more district was added in 1880. The City of Hobart and the Town of Launceston were exempted from the Act.

By 1906 there were, in addition to the city councils for Hobart and Launceston and the municipal district councils, many boards and trusts in Tasmania created for specific local government purposes. These had been formed in respect of water, drainage, roads, rabbits, health, fruit, recreation grounds, schools, works and other matters. There were in existence 105 road trusts, 19 rural municipalities, 23 town boards and 2 city councils; a total of 149 local authorities.

Rest of State after 1906

The *Local Government Act 1906* abolished all rural municipalities, town boards, water trusts, main road districts, etc. and replaced them with municipalities which took over the administration of all the local government functions previously administered by the numerous local bodies. Section 10 of the Act provided that a commission should divide the State into not more than 60 districts to be later proclaimed municipalities. The commission reported in 1907 and recommended that the State be divided into 50 municipalities. These did not include the cities of Hobart and Launceston which were governed respectively by the *Hobart Corporation Act 1893* and the *Launceston Corporation Act 1894*. The above recommendations were carried into effect by proclamation of the 50 municipalities. Subsequently, three of the municipalities were amalgamated—Queenborough and New Town with Hobart, and Invermay with Launceston. Since Glenorchy became a city in 1964 no other changes have taken place. Hence there are 46 municipalities and three cities in existence at the present time. Apart from the enlargement of Hobart and Launceston caused by the above amalgamations, the boundaries are still substantially the same as those proclaimed in 1907, although there have been numerous relatively minor boundary changes since then.

Inquiries into Local Government*Royal Commission 1938*

A Royal Commission was set up in December 1938 to inquire into and report upon certain aspects of local government in Tasmania. It issued its report on 11 August 1939. Recommendations covered administration and finance, the bases of valuation and assessment, the best form of local government, the number of municipal bodies, wards, the system of rating and co-ordination between municipal and State governments. One of the specific recommendations was that the number of municipal bodies should be reduced to two cities, three urban municipalities and thirty-four rural municipalities. However, this recommendation was not implemented.

Select Committee 1960

On 16th November 1960, a select committee of the House of Assembly was appointed to inquire into and report on local government. One of its terms of reference was 'whether amalgamation of certain municipalities would be of advantage to local government administration by creating greater efficiency and cutting down administrative costs'. It made its report on 1 August 1961. In relation to the above term of reference, the Committee recommended that it was essential that there be reduction in the number of municipalities in Tasmania and that to achieve this all boundaries should be reassessed as a matter of urgency by qualified experts, having regard to geographic, economic and population conditions. It further stated that it believed that a reduction in municipalities by approximately half would be the eventual means of creating greater efficiency within the municipalities and would cut administration costs.

Municipal Commission 1962

In 1962 the *Local Government Act* was passed; this statute repealed the *Local Government Act 1906* and other legislation relating to local government and consolidated the legislation in one Act. The 1962 Act also included provision for establishment of a Municipal Commission to inquire into and report on local government administration in Tasmania. In 1965 the Commission submitted its report recommending numerous amalgamations and boundary changes. If the changes had been put into effect there would have been two cities and 18 other municipalities. However, as a result of protracted litigation the State Government decided to amend the provisions of the 1962 Act under which the Commission was constituted, the 1965 report was not acted upon and the Commission was disbanded in March 1971.

Municipal Commission 1972

In 1971 amendments were made to the *Local Government Act 1962* in relation to appointment, functions and powers of a new Municipal Commission. The new Municipal Commission was appointed on 31 May 1972. The terms of reference given to the Commission included investigation of whether there should be creation, abolition, amalgamation or

partitioning of any municipality. The Commission presented its completed report to the Minister for Local Government on 28 March 1974. The main recommendations made in the Report are summarised below (a more detailed account of the Report is contained in the 1975 *Year Book*).

Recommendations: Extensive amalgamations and boundary re-arrangements of municipalities were recommended. If implemented, the latter proposals would have reduced the number of local government authorities by 14 (from 49 to 35) and extended the boundaries of Launceston City to incorporate most of the urban development around Launceston. The Commission reached the conclusion that the pattern of municipal boundaries in Tasmania was such that there must be some wasteful expenditure and a lower level of efficiency than would be obtained by some re-arrangement of the boundaries.

Release of the recommendations of the Municipal Commission caused an immediate unfavourable reaction in most of the municipalities affected by the proposed boundary changes. In August 1974, the State Parliamentary Labor Party met to consider the Commission's Report and decided that it should not be acted upon. As a result, the Report was not placed before Parliament for consideration.

Local Government—Present Organisation

Authority and Functions

The authority for, and the forms of, local government are prescribed entirely by State legislation which has largely been consolidated in the *Local Government Act* 1962. Hobart and Launceston cities operate under separate corporation acts but the other authorities, including the City of Glenorchy, operate under the Act of 1962.

The functions of the municipalities are set out in broad general terms in Section 176 of the *Local Government Act* as:

'A Municipality: (a) may for the welfare and good government of its district and the inhabitants thereof: (i) make by-laws; (ii) undertake, make and maintain works, buildings and services; and (iii) order and dispose the common affairs of its members; and (b) shall cause the Queen's peace to be kept and maintained within its districts.'

Particular authority is given by Section 180 for a council clerk to be a deputy clerk of the peace, registrar of the court of general sessions and clerk of petty sessions in his municipality.

In addition, by certain acts, the municipalities are given specific responsibilities, e.g. *Health Act*, *Local Courts Act*, etc.

Administration of Justice

This responsibility of the municipality to administer the lower courts of justice is confined to Tasmania. It would appear to be a carry-over from the very early days of local government when the municipality was also required to provide the police force. In all other states the administration is in the hands of a State department. The practice here would now appear to be continued by reasons of expediency. (It should be noted that the process of removing this function from the municipalities has already commenced and the lower courts in the cities of Hobart, Launceston and Glenorchy and the municipalities of Burnie, Clarence, Kingborough and St Leonards are administered by the State. It should also be noted that where municipalities administer the courts, they receive all fines into their revenue and in some instances the council clerks receive additional salary for this court work.)

Population

The estimated population of Tasmania's local government areas at 30 June 1977 ranged from as low as 320 in Bruny Municipality to a high of 50 070 for the City of Hobart. Of the 49 local government areas in the State, eight had populations of under 1 000 (see Chapter 6, Demography, for further details).

Electors

Persons eligible to vote in local government elections consist of owners or occupiers of rateable land who are naturalised British subjects over the age of 18 years. The former categories of spouse elector and ex-serviceman elector have been abolished and are now termed residence-electors and, where formerly enrolled, continue to be included in the

Electoral Index. To qualify as a residence-elect, a person must have lived in a municipality for a period of at least six months and be enrolled as an elector for the Legislative Council or House of Assembly in respect of a division or subdivision that includes the whole or a part of that municipality.

In 1972 the *Local Government Act* 1962 was amended and plural voting abolished; an elector may now exercise, at the most, three votes—one in his own right and two on behalf of other persons.

In no Australian state are unnaturalised aliens, who are owner-occupiers, eligible to vote at local government elections; Tasmania is the only state with a provision for aliens to have another person vote on their behalf.

Councillors

A councillor must be an elector of, and either reside, or carry on business, in the municipality and is subject to disqualification for certain breaches of conduct. The term of office is three years and one-third of the council retires each year. Councils may comprise six, nine, 12 or 15 councillors. The warden, deputy warden and treasurer are elected by the council members on an annual basis. (The electors of the City of Hobart elect the Lord Mayor and in Launceston and Glenorchy the electors elect the Mayor.) The office of warden is comparable with that of the mayor of a city or the president of a shire in other states.

Government Intervention

For any of a number of reasons, the Minister administering the *Local Government Act* may consider it necessary to recommend suspension of the elected councillors and the appointment of a commission, or in certain cases an administrator, to carry on municipal government in a particular municipality.

Cities, Municipalities and Towns

In Tasmania there are only two categories of local government; a municipality or a city. The Act provides for the establishment of towns and indicates requirements before such towns are proclaimed but these are not municipal administrative units. Generally an area is proclaimed as a town to bring into action certain provisions relating to rating and building requirements. Before a municipality can petition for a town to become a city, the town must have had, for five years before the petition, an average population of not less than 20 000.

Other than this population requirement for a city there are no provisions, such as exist in some of the other states, for enlarging or diminishing the status of municipalities to accord with increasing or decreasing population.

FINANCE

Introduction

For local government purposes Tasmania is divided into 49 areas, comprising 46 municipalities and the Cities of Hobart, Launceston and Glenorchy. There are no unincorporated areas.

Local government finance statistics in Tasmania are compiled by the Australian Bureau of Statistics from annual local government accounts. Under section 329 of the *Local Government Act* 1962 each local government authority has to submit its accounts annually to the Auditor-General. Copies of these accounts are also made available to the Bureau.

Accounts are compiled by all municipalities except Kingborough on a cash receipts and payments basis, and two basic types of accounts are distinguished, namely revenue and loan accounts. The Cities of Hobart, Glenorchy and Launceston and the Municipality of Kingborough submit accounts on an income and expenditure basis but they are analysed to show cash receipts and payments to assist comparison with other local government areas.

The term 'local government' is employed only in relation to the municipalities and city corporations. Details of semi-government authorities concerned with water supply appear in a later section of this chapter; such authorities provide bulk water but reticulation and sale to householders remain local government functions. Since 1961 the Metropolitan Water Board has incurred loan debts which, under earlier arrangements, would have been entered as the

water loan debts of Hobart, Glenorchy, Clarence and Kingborough local government authorities.

Business Undertakings

The classification 'business undertakings' is used in Australian local government finance statistics to include municipal tram and bus services, municipal electricity supply (generation or distribution), municipal water and sewerage schemes, municipal abattoirs, etc. In Tasmanian local government finance statistics, electricity supply ceased to appear as from 1948-49 (the Hydro-Electric Commission is now the sole supplier). Municipal tram and bus services ceased to appear as an item in 1955-56. The Metropolitan Transport Trust acquired the city transport services operating in Hobart, Launceston and Burnie some years ago. Consequently, the only activities under the heading of municipal 'business undertakings' in current Tasmanian statistics relate to water supply, sewerage and abattoirs.

Sources of Revenue

There are four main sources of local government revenue. These comprise rates, government grants, charges for business undertakings and services, and loan raisings.

Under the *Local Government Act* 1962, rates may be based on assessed annual value (i.e. the gross annual income, at the time of valuation, that the person owning the land might obtain by letting the land and its fixtures to a tenant), unimproved value (i.e. value of land only), the capital value (i.e. value of land plus improvements), or upon a composite value incorporating the unimproved value plus some arbitrary proportion of the value of improvements.

In Tasmania, it has been usual for rates to be based on annual values despite isolated and unsuccessful campaigns in favour of taxing on unimproved value only. In estimating annual value, the valuer is taking into account not only the land but also the improvements (e.g. buildings) so there is, in fact, a close relationship between movements in the total capital value of any property and movements in its assessed annual value. The *Land Valuation Act* 1971 consolidated and amended the law relating to land valuation.

System of Valuation

The valuation of property is carried out by a State Government authority, the Land Valuation Branch. Its valuations form the basis of two distinct taxes: (i) land tax collected by the State; and (ii) rates collected by local government authorities on the basis of assessed annual values.

Until 1975-76, land tax was based on the unimproved value of land. The *Land Valuation Act* 1971 set up the mechanism by which the basis could be changed to 'land value', being the capital value of the land in its present state but excluding the value of buildings and other artificially established improvements. For a complete definition of 'land value', reference should be made to the Act.

Since it is impossible to completely revalue all properties within the State in the course of a single year, revaluation is carried out on a rotational basis, e.g. St Leonards, New Norfolk and Lilydale were valued in 1971 and again in 1976.

Tasmania is the only state which uses the *assessed annual value* system of rating properties in all local government areas. In New South Wales and Queensland, site value rating is used almost exclusively and the majority of all local government authorities in Australia make use of the site value of property in determining at least part of their rates. Under site value rating, rates are based on the site (unimproved land) value of properties only, whereas under the assessed annual value system of rating, rates are based on a notional earning capacity of properties.

The following table shows the total value of all properties in the State and gives individual details for local government authorities with a total capital value exceeding \$25m at 1 July 1977:

Local Government

Value of Properties: Principal Local Government Authorities at 1 July
(\$ Million)

Local government authority	Year of revaluation (a)	Total capital value		Assessed annual value		Land value (b) 1977
		1976	1977	1976	1977	
Hobart	1974	543.17	552.27	38.13	38.64	170.30
Launceston	1975	302.16	307.02	24.64	25.03	97.52
Clarence	1974	269.62	279.93	16.47	17.04	84.48
Devonport	1977	122.01	271.88	7.54	16.59	81.45
Glenorchy	1973	224.89	231.61	16.89	17.33	59.92
Kingborough	1977	72.22	219.98	4.48	11.31	87.89
Burnie	1975	159.09	161.49	9.98	10.13	60.08
St Leonards	1976	131.18	137.06	8.94	9.35	33.45
Wynyard	1977	49.42	108.22	2.81	5.77	39.88
George Town	1977	37.88	102.48	2.40	6.39	22.72
New Norfolk	1976	97.68	98.13	5.34	5.36	18.31
Sorell	1977	23.71	77.84	1.16	3.83	32.36
Beaconsfield	1974	69.56	72.34	4.31	4.48	20.69
Lilydale	1976	69.60	71.54	4.47	4.59	21.00
Ulverstone	1974	64.12	66.85	3.63	3.77	23.71
Scottsdale	1977	24.67	55.76	1.32	2.80	21.18
Latrobe	1976	53.86	54.86	2.78	2.84	20.97
Circular Head	1973	46.77	46.92	2.40	2.40	20.36
Deloraine	1976	41.33	41.89	1.97	2.00	16.74
Evandale	1977	17.24	33.21	0.90	1.75	14.43
Longford	1974	32.51	33.11	1.76	1.79	14.20
Oatlands	1976	32.18	32.22	1.36	1.36	14.63
Hamilton	1977	14.68	31.91	0.66	1.44	15.62
Westbury	1973	29.19	29.77	1.53	1.56	11.08
Brighton	1973	24.29	27.16	1.27	1.43	7.78
Huon	1975	26.78	27.11	1.29	1.30	8.65
Zeehan	1976	27.02	26.88	1.79	1.79	2.72
King Island	1976	26.43	26.76	1.30	1.32	12.64
Campbell Town	1977	12.21	25.09	0.59	1.22	12.28
Remaining municipalities .....	..	257.49	280.70	13.25	14.25	108.57
Total Tasmania .....	..	2 902.96	3 531.99	185.36	218.86	1 155.61

(a) Latest revaluation effective from 1 July of year shown.

(b) As from 1 July 1976: (i) land tax is levied upon land value and not unimproved value; (ii) unimproved land value is no longer determined.

The table that follows shows the value of property in Tasmania over the last 10 years:

Total Property Valuation in All Local Government Areas at 1 July
(\$ Million)

Year	Total capital value	Unimproved value	Assessed annual value	Year	Total capital value	Unimproved value	Assessed annual value	Land value
1968	1 452.38	374.49	86.35	1973	1 995.91	511.39	124.61	} n.a.
1969	1 571.96	411.72	95.57	1974	2 317.03	619.19	147.41	
1970	1 691.37	441.88	102.98	1975	2 570.15	696.26	165.47	
1971	1 768.07	454.47	107.78	1976	2 902.51	763.67	185.36	
1972	1 874.17	483.44	114.86	1977	3 531.99	n.a.	218.86	1 155.61

Rates

Revenue for local government authorities in Tasmania comes mainly from rates levied at so much in the dollar on the assessed annual value. Receipts from rates have not for sometime met the expense of the increasing range and cost of the services supplied. Government grants are a recognised means of increasing the revenue of municipalities.

Grants to Local Government

Background

In recent years, major developments have occurred in relation to the finances of local government in Australia. The combination of rate structures reaching 'saturation' levels and rising costs of operation, together with increased responsibilities for facilities in areas such as recreation, health, roads, water and sewerage, etc., has led local government throughout Australia to press for general revenue grants from governments to supplement revenue raised from rates. This demand has arisen despite the increasing assistance given in the form of specific purpose grants from both State and Federal Governments.

The initial major change in local government financial operations came in 1973, when the Federal Government amended the *Commonwealth Grants Commission Act* to enable the Commission to recommend equalisation grants to local government. Procedures were thereby created which provided direct access by local government to the financial resources of the Federal Government. For 1975-76 and 1976-77, the amounts recommended by the Grants Commission for Tasmanian authorities were \$2 292 000 and \$4 004 000, respectively.

Following the December 1975 Federal Elections, a round of Premiers' Conferences was held early in 1976, at which details were announced for a revised scheme of assistance to local government. Under this scheme, a fixed percentage of Federal personal income tax is set aside for distribution through the State Governments to local government. The money is allocated according to two distinct assessments:

- (i) a per capita grant to each local government body; and
- (ii) an equalisation grant to be distributed to municipalities through State Grants Commissions.

With the establishment of this scheme, the responsibility for recommendation of equalisation grants to local government was transferred from the Commonwealth Grants Commission to the control of State Grants Commissions. These were established by legislation. In Tasmania, the *State Grants Commission Act* received Royal Assent in June 1976, and a Commission comprising three members was established.

Conditions of Operation

For 1977-78, the Federal Government allocated \$165.3m to the states for distribution to local governments. This figure was related to personal income tax collections in 1976-77 to derive a percentage figure of 1.52 per cent. In future years this percentage figure will be applied to the amount of personal income tax collected in the immediately preceding year to determine the amount of general purpose assistance to be allocated for distribution to local government.

The distribution of the amount of \$165.3m between the states was made on a percentage basis recommended by the Commonwealth Grants Commission. The following state percentages and amounts were derived under the formula determined by that Commission:

Federal Grants to Local Government, 1977-78

State	Percentage of total	Amount of grant (\$'000)
New South Wales	36.4977	60 341
Victoria	25.4513	42 078
Queensland	16.8606	27 875
South Australia	8.6010	14 220
Western Australia	9.3897	15 524
Tasmania	3.1997	5 290
Total	100.0000	165 328

A condition under the new scheme is that each state distribute not less than 30 per cent of its annual allocation to all local government authorities on primarily a population basis. Account may also be taken of the area of the authority, population density or any similar factor approved by the Federal Government. The remainder of a state's grant is placed under

the control of the States Grants Commission for distribution to local government authorities according to the principle of relative financial need.

For 1977-78, 30 per cent (\$1.6m) of the Tasmanian allocation (\$5.3m) was distributed on a per head of population basis. The balance (\$3.7m) was distributed by the State Grants Commission as equalisation grants.

Principles for Determining Equalisation Grants

The functions of the State Grants Commission are largely covered by Section 9 of the Act, which sets down certain broad principles to be followed. The fundamental guideline for the determination of grants is set out in Section 9 (2) (d) of the Act. It requires the Commission to ensure that, as far as possible, the grant recommended for a municipality will be an amount which, providing it makes a reasonable rating effort, will enable it to provide services at about the same standard as other municipalities of a similar type. This is viewed as the principle of relative financial need. In determining the grants necessary to equalise the fiscal capacity of municipalities, the Commission has adopted the principle that a grant must basically reflect differences between:

- (i) the revenue-raising capacity of municipalities; and
- (ii) the relative cost of providing services (expenditure differentials).

The Commission has adopted methods to identify and measure those factors which affect relative rateable capacity and the cost of functioning at a given standard. To the extent to which a municipality is below the standard or faced with higher costs, a prima facie case exists for an equalisation component.

For 1976-77 the Commission decided that an equal allocation should be made between revenue and expenditure components but, in so doing, included the 'per capita' element (30 per cent) of the funds in the revenue component. The Commission, in 1977-78, re-examined this basis of allocation and came to the conclusion that, overall, it tended to unduly favour larger municipalities. It is now leaning to the view that allocation to revenue and expenditure components should be equal within the amount available for equalisation grants. In order that the impact on any municipality should not be too great, the Commission decided to go only part of the way in 1977-78 and the allocation for that year was as follows:

	\$
(i) revenue disabilities	1 422 000
(ii) expenditure disabilities	2 281 000
Total	<u>3 703 000</u>

The Commonwealth Grants Commission's only role under the new scheme is to advise of the appropriate percentage distribution of federal personal income tax between the states, and, in the initial period, to provide advice to the state bodies on methods for calculating grants to municipalities.

Financial Assistance by Grants Commission

The following table provides details of financial assistance to Tasmanian municipalities from distributions under the revised scheme for 1976-77 and 1977-78:

Federal Government Financial Assistance to Local Government in Tasmania (a)

Local government area	1976-77				1977-78			
	Per capita grant	Equalisation grant	Total grant	Per head of population (b)	Per capita grant	Equalisation grant	Total grant	Per head of population (b)
Beaconsfield	\$'000 36	\$'000 75	\$'000 111	\$ 8.84	\$'000 49	\$'000 110	\$'000 159	\$ 12.32
Bothwell	2	16	18	21.43	3	25	28	33.33
Brighton	11	40	51	10.26	19	60	79	14.06
Bruny	1	10	11	34.38	1	14	15	46.88

Federal Government Financial Assistance to Local Government in Tasmania (a)—continued

Local government area	1976-77				1977-78			
	Per capita grant	Equalisation grant	Total grant	Per head of population (b)	Per capita grant	Equalisation grant	Total grant	Per head of population (b)
	\$'000	\$'000	\$'000	\$	\$'000	\$'000	\$'000	\$
Burnie	61	139	200	10.19	77	164	241	12.35
Campbell Town	5	19	24	14.81	6	28	34	20.99
Circular Head	24	95	119	15.32	30	124	154	19.82
Clarence	124	308	432	10.20	165	364	529	12.25
Deloraine	14	43	57	11.83	19	63	82	17.01
Devonport	65	136	201	9.33	84	169	253	11.58
Esperance	9	28	37	11.64	12	45	57	17.98
Evandale	4	22	26	16.25	6	30	36	21.82
Fingal	9	39	48	16.38	11	59	70	24.56
Flinders	3	30	33	33.67	4	43	47	47.96
George Town	19	51	70	10.31	26	62	88	12.74
Glamorgan	3	17	20	15.04	5	25	30	22.22
Glenorchy	131	199	330	7.75	166	232	398	9.34
Gormanston	1	10	11	27.50	2	18	20	52.63
Green Ponds	2	17	19	21.84	3	23	26	29.89
Hamilton	11	49	60	16.90	14	58	72	21.56
Hobart	156	108	264	5.22	197	135	332	6.63
Huon	13	50	63	12.94	19	74	93	19.02
Kentish	13	41	54	13.14	16	59	75	18.66
King Island	9	43	52	18.91	11	54	65	24.07
Kingborough	38	91	129	9.25	54	118	172	11.68
Latrobe	16	33	49	8.80	22	50	72	12.72
Launceston	101	110	211	6.38	129	140	269	8.19
Lilydale	26	77	103	11.66	34	98	132	14.80
Longford	15	26	41	7.55	21	43	64	11.70
New Norfolk	32	69	101	9.86	40	88	128	12.50
Oatlands	6	24	30	13.57	9	41	50	22.52
Penguin	15	36	51	10.16	20	51	71	13.92
Port Cygnet	5	26	31	15.05	8	39	47	22.71
Portland	4	22	26	15.76	6	28	34	20.12
Queenstown	15	74	89	18.86	18	114	132	29.60
Richmond	5	25	30	17.75	7	32	39	22.81
Ringarooma	7	35	42	18.58	9	44	53	23.66
Ross	1	12	13	23.64	2	21	23	41.82
St Leonards	53	114	167	9.08	72	150	222	11.78
Scottsdale	11	27	38	9.55	16	35	51	12.56
Sorell	12	63	75	17.24	17	89	106	23.93
Spring Bay	5	28	33	18.64	7	45	52	28.73
Strahan	1	14	15	34.09	2	20	22	51.16
Tasman	3	18	21	22.11	4	25	29	30.53
Ulverstone	35	84	119	9.76	48	111	159	12.76
Waratah	6	31	37	17.79	8	43	51	24.17
Westbury	15	33	48	8.68	22	49	71	12.66
Wynyard	33	82	115	9.85	46	114	160	13.52
Zeehan	14	63	77	14.75	20	77	97	17.90
Tasmania	1 202	2 802	4 004	9.83	1 587	3 703	5 290	12.88

(a) Excludes grants under the Regional Employment Development scheme and grants for specific purposes. Comprises: (i) grants to municipalities on a population basis; and (ii) equalisation grants as determined by the State Grants Commission.

(b) Figures are based on the populations of the municipalities at the beginning of each year.

Total Receipts and Payments

The following table shows total receipts and payments of the Tasmanian municipalities and cities for recent years:

Local Government Authorities
Total Receipts and Payments: All Funds
(\$'000)

Year	Receipts			Payments			Surplus (+) or deficit (-)
	Revenue accounts (a)	Loan accounts (b)	Total	Revenue accounts	Loan accounts	Total	
1971-72	31 505	8 574	40 079	30 985	8 504	39 488	+ 591
1972-73	37 000	9 473	46 473	34 552	9 668	44 220	+2 253
1973-74	40 376	9 521	49 897	39 641	8 803	48 444	+1 453
1974-75 r	52 313	13 994	66 307	52 224	12 677	64 901	+1 406
1975-76 r	68 345	18 435	86 780	65 076	19 368	84 444	+2 336
1976-77	75 711	19 447	95 158	68 467	20 548	89 015	+6 143

(a) Includes grants from the Metropolitan Water Board to cover working expenses.

(b) Includes loan raisings, sales, capital grants received, etc.

Total Receipts: The following table highlights the various sources available for funding Tasmanian local government activities:

Composition of Total Receipts of Tasmanian Municipalities
(\$'000)

Source	1974-75 r		1975-76 r		1976-77	
	Amount	Per cent of total	Amount	Per cent of total	Amount	Per cent of total
Rates and licences—						
Ordinary services	22 333	33.7	27 162	31.3	32 003	33.6
Business undertakings	10 197	15.4	12 529	14.4	15 224	16.0
Total	32 530	49.1	39 691	45.7	47 227	49.6
Grants (a)—						
General purpose	1 669	2.5	2 292	2.6	4 004	4.2
Specific purpose—						
Ordinary services	7 327	11.1	11 967	13.8	7 792	8.2
Business undertakings	1 873	2.8	2 490	2.9	2 357	2.5
Total specific purpose	9 200	13.9	14 457	16.7	10 149	10.7
Total all grants	10 869	16.4	16 749	19.3	14 152	14.9
Revenue Fund receipts (b)—						
Ordinary services	7 961	12.0	10 403	12.0	12 272	12.9
Business undertakings	2 413	3.6	3 238	3.7	3 327	3.5
Total	10 374	15.6	13 641	15.7	15 599	16.4
Loan Fund receipts—						
Loans	12 260	18.5	15 870	18.3	17 775	18.7
Other receipts (c)	275	0.4	829	1.0	405	0.4
Total	12 535	18.9	16 699	19.2	18 180	19.1
Total receipts	66 307	100.0	86 780	100.0	95 158	100.0

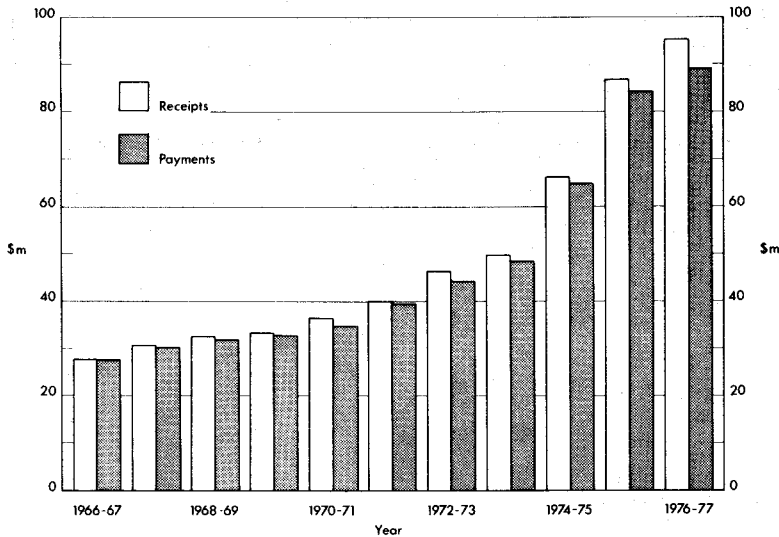
(a) Comprises all grants; i.e. grants for recurrent and capital purposes.

(b) Excludes rates and grants which are shown separately.

(c) Comprises sales of materials credited to loan funds, recoveries of capital expenditure, etc. but excludes capital grants which are included in the total grants figures.

The following graph summarises receipts and payments over a ten-year period:

Local Government Authorities: Total Receipts and Payments



Rate Collections

The following table shows details of the rates collected in Tasmania for the latest three-year period available:

Rates Received (a) by Local Government Authorities (\$'000)

Rate	1974-75	1975-76	1976-77
Ordinary services (b)—			
General	10 712	13 427	15 829
Street lighting	230	290	343
Road	6 790	7 939	9 300
Health	614	r 673	761
Sanitary and garbage	527	r 712	851
Recreation and reserves	1 649	r 2 024	2 450
Halls and community centres	106	r 108	131
Library	225	296	315
Fire brigade	374	r 467	557
Drainage	219	r 249	301
Other	168	208	187
Total	21 613	26 395	31 025
Business undertakings—			
Water	5 668	6 986	8 364
Sewerage	4 528	5 543	6 860
Total	10 197	12 529	15 224
Grand total	31 810	38 924	46 249
Percentage increase (c)	27.3	22.4	18.8

(a) Net of refunds.

(b) Where a single consolidated rate has been charged (e.g. Hobart and Launceston), the collection has been dissected between 'ordinary' and the two 'business undertakings' components but the 'ordinary' component has been entered, without further analysis as 'general'.

(c) Over previous year.

Revenue of Local Government Authorities

The largest proportion of local government revenue fund receipts comes from rates (61 per cent in 1976-77) which are direct charges on owners of property.

After rates, the next most important sources of revenue fund receipts are: (i) government and semi-government grants; and (ii) charges for public works and services. The next table shows the total annual revenue fund receipts by all municipalities and cities, for a three-year period, classified according to source.

Local Government Authorities
Revenue Fund Receipts: Ordinary Services and Business Undertakings
Classified According to Source
(\$'000)

Source of receipts	1974-75 r	1975-76 r	1976-77
Ordinary services—			
Rates	21 613	26 395	31 025
Licences	720	768	978
Total rates and licences	22 333	27 163	32 003
Public works and services—			
Reserves, parks, etc.	718	883	976
Halls	112	160	277
Caravan parks	154	170	130
Cemeteries and crematoria ..	286	371	424
Other council properties	671	910	1 161
Private and other works	1 220	2 436	2 129
Parking	1 215	1 378	1 766
Other services	736	1 132	1 300
Total	5 112	7 440	8 163
Government and semi-government grants—			
Roads	3 117	3 545	4 073
Grants Commission	1 669	2 292	4 004
Other (a)	3 621	7 864	3 442
Total	8 407	13 701	11 519
Other receipts (b)	2 849	2 963	4 109
Total ordinary services	38 701	51 267	55 795
Business undertakings—			
Water supply—			
Rates	5 668	6 986	8 364
Government and semi-government grants	632	833	908
Other	752	977	988
Total	7 053	8 795	10 259
Sewerage—			
Rates	4 528	5 543	6 860
Government and semi-government grants	371	479	459
Other	312	480	555
Total	5 211	6 502	7 873
Abattoirs (c)	1 349	1 781	1 784
Total business undertakings	13 612	17 078	19 916
Grand total	52 313	68 345	75 711
Percentage increase (d)	29.6	30.6	10.8

(a) Includes unemployment grants.

(b) Includes additions to sinking funds, interest earnings, net deposits, donations and tolls.

(c) Comprises fees charged, sales of products, etc.

(d) Over previous year.

Revenue Receipts, Summary

The preceding table does not show combined figures for all rates or government grants; totals for these items are included in the summary table which follows. For 1976-77, the percentage contributions of these items to total revenue receipts were as follows: rates, 61.1; government and semi-government grants, 17.0; ordinary services, 10.8; business undertakings, 4.4; licences, 1.3; and other receipts, 5.4 per cent.

**Revenue Fund Receipts: Ordinary and Business Undertakings
(\$'000)**

Year	Rates (net)	Licences	Govt and semi-govt grants	Business under- takings (a) (b)	Ordinary services (b)	Other receipts	Total receipts
1971-72.....	20 257	479	4 989	1 706	2 877	1 198	31 505
1972-73.....	22 790	581	6 931	2 112	3 002	1 585	37 000
1973-74.....	24 984	641	5 224	2 370	4 012	3 145	40 376
1974-75 r.....	31 810	720	9 410	2 413	5 112	2 849	52 313
1975-76 r.....	38 924	768	15 012	3 238	7 440	2 963	68 345
1976-77.....	46 249	978	12 886	3 326	8 163	4 109	75 711

- (a) Metropolitan Water Board reimbursements to Hobart, Glenorchy, Clarence and Kingborough have been netted off against revenue fund payments as from 1974-75.
 (b) Excludes rates and grants which are shown separately.

Revenue Fund Payments by Local Government Authorities

The following table shows annual payments by local government authorities from revenue funds:

**Local Government Authorities
Revenue Fund Payments: Ordinary Services and Business Undertakings
Classified According to Service
(\$'000)**

Payments for—	1974-75 r	1975-76 r	1976-77
Ordinary services—			
General administration	4 831	5 790	6 682
Loan charges—Interest	3 187	3 748	4 466
Redemption	2 256	2 446	2 609
Sinking fund contributions	197	223	232
Total	5 641	6 417	7 306
Public works and services—			
Recreational facilities and reserves	4 889	6 520	5 591
Halls and community centres	645	823	1 043
Roads, bridges and street construction ...	12 288	14 007	14 516
Garbage, sanitary, etc.	1 646	2 002	2 237
Health and welfare	831	1 078	1 187
Street lighting	597	646	752
Parking	715	898	985
Private and other works	919	1 861	1 614
Other	1 438	2 104	2 153
Total	23 968	29 938	30 078

Local Government Authorities
Revenue Fund Payments: Ordinary Services and Business Undertakings
Classified According to Service—continued
(\$'000)

Payments for—	1974-75 <i>r</i>	1975-76 <i>r</i>	1976-77
Grants	1 393	1 633	1 883
Other payments	2 133	3 655	2 601
Total ordinary services	37 964	47 434	48 550
Business undertakings—			
Water supply—			
Loan charges—Interest	926	989	1 080
Redemption	960	761	775
Sinking fund contributions	27	29	30
Total	1 915	1 779	1 885
Other payments (<i>a</i>)	5 668	7 339	8 375
Total water supply	7 583	9 118	10 260
Sewerage—			
Loan charges—Interest	1 809	2 332	3 070
Redemption	960	968	1 073
Sinking fund contributions	73	90	99
Total	2 839	3 389	4 242
Other payments (<i>b</i>)	2 545	3 526	3 754
Total sewerage	5 383	6 915	7 995
Abattoirs—			
Loan charges—Interest	52	62	91
Redemption	28	30	39
Sinking fund contributions	10	12	14
Total	91	104	145
Other payments (<i>b</i>)	1 203	1 506	1 517
Total abattoirs	1 294	1 610	1 662
Total business undertakings	14 260	17 643	19 917
Grand total	52 224	65 076	68 467
Percentage increase (<i>c</i>)	31.7	24.6	5.2

(*a*) Comprises working expenses, capital expenditure out of revenue fund, grants paid to semi-government authorities and sundry payments.

(*b*) Comprises working expenses, capital expenditure out of revenue fund and sundry payments.

(*c*) Over previous year.

The Beaconsfield Municipality is served by the West Tamar Water Supply Scheme, which the municipality maintains and manages as agent for the Rivers and Water Supply Commission. All debt in the Municipality in respect of water supply became the responsibility of the Commission on 1 July 1960. Interest and principal repayments to the Commission on loans raised for the purpose of this water supply have been included in 'Water supply—Other payments' in the above table.

Launceston, Burnie, Devonport and Campbell Town operate municipal abattoirs; other abattoirs in Tasmania are operated by the private sector.

The next table gives a summary of local government revenue fund payments:

Revenue Fund Payments: Ordinary Services and Business Undertakings
(**\$'000**)

Year	Adminis- tration (a)	Loan charges				Other payments		Total
		Interest	Redem- tion (b)	Sinking fund contribu- tions (b)	Business under- takings (c)	Roads, streets, bridges	Other	
1971-72	2 798	4 548	3 106	269	6 434	7 096	6 735	30 985
1972-73	3 074	4 918	3 322	281	7 253	8 042	7 664	34 552
1973-74	3 604	5 307	3 660	297	8 673	8 336	9 765	39 641
1974-75 r.	4 831	5 974	4 204	308	9 415	12 288	15 204	52 224
1975-76 r.	5 790	7 131	4 205	354	12 370	14 007	21 219	65 076
1976-77	6 682	8 707	4 496	375	13 646	14 516	20 045	68 467

(a) Administration charged to ordinary services only.

(b) Includes redemption from sinking fund.

(c) Metropolitan Water Board reimbursements to Hobart, Glenorchy, Clarence and Kingborough have been netted off against revenue fund payments as from 1974-75.

Loan Receipts, Payments and Debt

At 30 June 1977 the aggregate loan debt of all local government authorities was \$122 950 400, of which only \$4 972 600 (i.e. 4.0 per cent) was owed to the State Government. The main Tasmanian sources of loans for local government authorities are banks, superannuation and various trust funds, and insurance companies. The cities of Hobart and Launceston also raise loans by public issues.

The next table shows the loan account receipts of all local government authorities:

Local Government Authorities: Loan Account Receipts
(**\$'000**)

Particulars	1972-73	1973-74	1974-75	1975-76	1976-77
Loan raisings for—					
Sewerage	3 070	2 590	4 871	6 607	6 859
Road, street and bridge construction ..	2 065	2 564	2 449	3 277	4 299
Water supply	574	766	831	1 236	1 962
Recreational facilities	614	830	712	1 392	1 395
Other	1 829	1 823	3 397	3 358	3 259
Total raisings	8 151	8 574	12 260	15 870	17 775
Government and semi-government grants	917	668	1 459	1 736	1 267
Other receipts (a)	405	279	274	829	405
Total receipts	9 473	9 521	13 994	18 435	19 447

(a) Includes recoveries of capital expenditure, sales of materials credited to loan funds, contributions from the private sector credited to loan funds, etc.

The next table shows details of payments from the loan accounts of all local government authorities:

Local Government

**Local Government Authorities: Payments from Loan Accounts
Classified According to Purpose
(\$'000)**

Purpose	1972-73	1973-74	1974-75	1975-76	1976-77
Water	1 118	1 145	1 041	2 112	2 825
Sewerage	3 389	2 487	4 229	7 596	7 672
Drainage	432	351	448	460	801
Road, street and bridge construction	2 179	2 462	2 751	3 469	4 492
Recreational facilities	681	1 108	1 018	1 871	1 632
Halls and community centres	132	377	968	1 682	517
Other	1 737	873	2 224	2 179	2 609
Total	9 668	8 803	12 677	19 368	20 548
Percentage increase (a)	13.7	-8.9	44.0	52.8	6.1

(a) Over previous year.

The amount that any local government authority can raise is governed by:

- (i) The difficulty in finding willing lenders.
- (ii) The fact that the approval of the State Treasury is required.
- (iii) The ability of an authority to repay its debt. The *Local Government Act 1962* restricts the total indebtedness of an authority to 10 times its average annual income for the preceding three financial years.

The following table shows, in summary form, loan raisings, loan debt and sinking funds:

**Local Government Authorities: Loan Raisings, Loan Debt and Sinking Funds
(\$'000)**

Year	Loan raisings during financial year			Loan debt at 30 June			Total of sinking funds at 30 June (c)
	From State Government (a)	From other sources (b)	Total	To State Government	To other creditors	Total	
1971-72	50	7 210	7 260	1 063	78 844	79 907	2 451
1972-73	78	8 074	8 151	1 130	83 652	84 781	2 788
1973-74	101	8 473	8 574	1 187	88 579	89 766	3 060
1974-75 r	1 245	10 430	11 675	2 379	95 513	97 892	3 367
1975-76 r	1 583	14 297	15 880	4 463	105 202	109 665	3 766
1976-77	594	17 181	17 775	4 973	117 977	122 950	4 345

(a) These advances were from the State Treasury direct, and exclude those from authorities such as the Housing Department and the Metropolitan Transport Trust.

(b) Includes advances from the Housing Department and the Metropolitan Transport Trust.

(c) Sinking funds maintained by municipalities and cities for debt redemption purposes.

Source of Loan Funds

It can be seen from the preceding table that the local government loan debt includes only a small liability in respect of advances made by the State Treasury. However, the proportion of total debt owed to the State Government has increased in recent years due to arrangements under the National Sewerage Program, whereby the Federal Government has made advances to the State. These funds have then been loaned by the State Government to local government authorities.

Debt owed to State authorities (but not directly to the Treasury) has also increased in recent years, principally due to co-operation between individual municipalities and the State Housing Department. In planning the establishment of large housing estates, the Housing Department has been concerned with the provision of certain essential services (e.g. water and sewerage); where such services have required capital expenditure by a municipality, the Department has made some loan funds available.

Instalment Debentures

Much of the debt of the municipalities is in the form of instalment debentures which involve equal periodic payments (usually half-yearly); such payments are allocated to redemption and interest in changing proportions as the loan approaches maturity.

Employees of Local Government Authorities

The following table shows total employees of local government authorities over a five-year period. The number of employees of individual authorities ranges from over 500 persons to as low as one person.

Local Government Authorities: Persons Employed (a) at 30 June

Particulars	1973	1974	1975	1976 (b)	1977
General administration—					
Males	529	543	558	479	487
Females	222	235	290	283	277
Persons	751	778	848	762	764
All other services—					
Males	2 152	1 957	2 807	1 956	2 228
Females	37	29	165	156	160
Persons	2 189	1 986	2 972	2 112	2 388
Total—					
Males	2 681	2 500	3 365	2 435	2 715
Females	259	264	455	439	437
Persons	2 940	2 764	3 820	2 874	3 152

- (a) Comprises permanent and temporary employees, including persons employed on local government work programs financed by Federal Government unemployment relief grants; part-time employees are excluded.
- (b) The reduction in the number of 'General administration' personnel is due to a reassessment of the distinction between administration and 'All other services' classifications. Figures from 1976 are not strictly comparable with those for earlier years.

WATER SUPPLY AND SEWERAGE

Water supply and sewerage were once exclusively the responsibility of the cities and municipalities; two semi-government authorities, the Metropolitan Water Board, and the Rivers and Water Supply Commission, now operate bulk supply schemes, piping water for distribution by the local government authorities in the Hobart and Launceston areas, and directly to certain industrial consumers. These authorities and their functions are described below.

Metropolitan Water Board

The overall control of water supply in Hobart, Clarence, Glenorchy and Kingborough is vested in the Metropolitan Water Board, but the four local government authorities retain primary responsibility for reticulation and sale to consumers. The Board has a large pumping station and treatment plant at Bryn Estyn on the Derwent, pipeline capacity being 136 megalitres per day. Before the Board came into operation in 1962, the four metropolitan local government authorities had their own supply schemes (e.g. Hobart was supplied from Lake Fenton and Mount Wellington); these schemes still operate but the Board's pumping works based on the Derwent now give an assured supply.

The Board also controls the Southern Regional Water Supply Scheme which draws water from the Derwent at Lawitta to supply Hobart's eastern shore suburbs. On the eastern shore, the Board has now extended its service to the towns of Cambridge, Midway Point, Sorell, Seven Mile Beach, Lauderdale and Rokeby, while western shore extensions serve Margate, Snug and Howden.

Financial Relationship

Under the *Metropolitan Water Board Act 1961*, the four metropolitan local government authorities no longer borrow money for metropolitan water works, but are provided with the necessary capital by the Board which obtains its funds from private lenders and the State Loan Fund, the local authorities in turn being required to make revenue contributions to the Board. The effect of this arrangement can be seen in State local government loan debt tables where the debt in respect of water shows only very minor annual increases; in effect, the expenditure of the four metropolitan local government authorities for water works undertaken since 1961 is reflected in the debt of the Board and not in debts of the municipalities. At 30 June 1977 the loan debt of the Board to the State Treasury was \$18.14m and to other lenders \$9.18m.

The financial relationship between the Board and the four metropolitan local government authorities is summarised in the following table:

Metropolitan Water Board: Income and Expenditure
(\$'000)

Particulars	1972-73	1973-74	1974-75	1975-76	1976-77
Income					
Municipal contributions—					
Hobart	959	1 202	1 392	1 701	1 998
Glenorchy	595	717	806	953	1 084
Clarence	592	697	750	942	1 155
Kingborough	114	133	150	192	255
Special consumers	351	385	315	302	361
Direct earnings, Southern Regional Scheme	353	324	367	473	426
Other revenue	71	92	142	215	245
Total	3 035	3 550	3 921	4 778	5 524
Expenditure					
Reimbursement of working expenses—					
Hobart	390	414	542	729	841
Glenorchy	270	299	406	483	564
Clarence	146	145	194	190	245
Kingborough	53	67	80	88	112
Bulk supply, operation costs	673	639	733	972	1 012
Administrative expenses	83	101	141	147	184
Interest	1 254	1 300	1 452	1 684	1 933
Depreciation	346	369	411	449	490
Total	3 216	3 334	3 960	4 742	5 382

The preceding table excludes capital contributions. These are shown in the next table:

Metropolitan Water Board: Capital Contributions to Southern Local Government Authorities
(\$'000)

Particulars	1972-73	1973-74	1974-75	1975-76	1976-77
Hobart—					
Construction and improvement	244	183	202	382	354
Loan redemption and conversion	26	33	86	38	37
Total	270	215	288	420	391
Glenorchy—					
Construction and improvement	100	121	113	r 360	401
Loan redemption and conversion	124	155	178	43	45
Total	224	276	291	r 403	446
Clarence—					
Construction and improvement	50	44	69	42	322
Loan redemption and conversion	47	49	94	43	50
Total	97	94	163	85	372

**Metropolitan Water Board: Capital Contributions to Southern
Local Government Authorities—continued**
(*\$'000*)

Particulars	1972-73	1973-74	1974-75	1975-76	1976-77
Kingborough—					
Construction and improvement.....	81	93	278	167	122
Loan redemption and conversion	13	13	52	23	10
Total	94	106	331	190	132
Total—					
Construction and improvement	475	441	662	951	1 199
Loan redemption and conversion	210	250	410	147	142
Grand total.....	685	691	1 073	1 098	1 341

The Board makes capital contributions to the four local government authorities for: (i) construction and improvement of their water works; and (ii) redemption of their water debt raised prior to creation of the Board. The Board finances these capital contributions by: (i) borrowing from the State Government; (ii) borrowing from the public; and (iii) application of internal funds, e.g. depreciation funds. The cost of servicing loans, raised by the Board to meet local government requirements, is met from revenue contributions by the four local government authorities.

Capital Expenditure

Funds raised by the Board for capital purposes in 1976-77 were \$1 750 000, made up of \$750 000 from State Loan Funds and \$1 000 000 from external borrowings. Capital expenditure during the year included: \$157 000 for boosting the Derwent Water Supply; \$22 000 for standby pumps and \$1 198 000 for municipal reticulation systems.

Rivers and Water Supply Commission

Introduction

The *Water Act 1957*, proclaimed as from 1 September 1958, conferred on the Rivers and Water Supply Commission all powers which had been previously exercised by the Water, Sewerage and Drainage Board. The Commission exercises a general control over the utilisation of the State's water resources and has specific functions in relation to local government authority water, sewerage and drainage schemes. It also operates the North Esk Regional Water Supply, West Tamar Water Supply, Prosser River Supply, Togari Water Supply and Cressy-Longford Irrigation Scheme. (Details relating to the last two schemes appear in the chapter 'Land Use and Agriculture'.)

Relations with Local Government Authorities

The Commission examines all proposed municipal water supply and sewerage schemes before construction commences to ensure that the schemes are economically sound. (Schemes proposed by the three cities, Hobart, Launceston and Glenorchy are exempt from examination by the Commission.) If a scheme is considered to be beyond the financial resources of the local authority, the Commission may recommend to the Minister for Lands and Works that a subsidy be paid. Such assistance is payable where investigations show that the revenue which a council might reasonably be expected to raise from rates and other charges is not sufficient to meet the annual loan charges and expenditure on maintenance, operation and administration. In determining the amount of financial assistance payable to any municipality, the Commission takes account of the maximum revenue which that municipality might reasonably be expected to raise from rates and other charges. An annual revenue requirement for each subsidised scheme is determined. This is reviewed from time to time to take account of increases in annual values and of the capacity of ratepayers to contribute to the annual costs of water and sewerage schemes.

Regional Schemes

North Esk Regional Water Supply: The scheme, managed by the Commission, serves portions of the municipalities of Evandale, George Town, Lilydale, St Leonards and Westbury. In addition the scheme provides water for industrial purposes to Bell Bay. Total income from the scheme during 1976-77 was \$699 000 which included sale of water to: (i) municipalities, \$483 000; (ii) industrial users, \$173 000; and (iii) wayside consumers, \$14 000. Total expenditure for the year amounted to \$753 000. At 30 June 1977, capital cost of the scheme amounted to \$5.6m. A new water treatment plant at Chimney Saddle, capable of handling 32 million cubic metres per day, was opened in November 1976 at a cost of approximately \$1.4m.

West Tamar Water Supply: This scheme was partially completed by the Beaconsfield Municipality but under the *West Tamar Water Act 1960* was vested in the Rivers and Water Supply Commission. The Act provided that the scheme should be managed and maintained by the Beaconsfield Council as agent for the Commission. The level of charges is determined by the Commission; Beaconsfield Municipality collects revenue on behalf of the Commission and is reimbursed for expenditure incurred. The scheme serves the western shore of the Tamar located in the Beaconsfield Municipality. Total income from the scheme during 1976-77 was \$334 000 while expenses of the scheme were \$425 000. Capital cost of the scheme to 30 June 1977 was \$2.6m.

Prosser River Scheme: This scheme supplements the water supply for the town of Orford in the Spring Bay Municipality and also supplies water to the Triabunna woodchip plant. During the year the water supply was extended to Shelley Beach. Income for the year 1976-77 was \$16 000, while expenses amounted to \$51 000. Capital cost of the Prosser River Scheme to 30 June 1977 amounted to \$438 000.

PLANNING AUTHORITIES

Town and Country Planning

Introduction

Before the Federal Labor Government took office in 1941, governments (both state and federal) had shown little interest in town planning legislation. The war-time Federal Labor Government encouraged activity in this field and in the period 1944-45 four states, including Tasmania, passed legislation with provisions largely based on existing British and New Zealand planning statutes.

Passed in 1944, the *Tasmanian Town and Country Planning Act* applied only to areas which were proclaimed as a result of municipal requests. The Act created the position of Town and Country Planning Commissioner. In 1962 the *Town and Country Planning Act* was repealed and its provisions incorporated in the *Local Government Act 1962* under which the powers of the Commissioner were broadened so that, with the approval of the Minister, he could require any municipality to prepare a planning scheme.

The Commissioner for Town and Country Planning functions as a corporation solely under the *Local Government Act 1962* and in respect of his statutory powers is responsible to Parliament. The Commissioner, the Deputy Commissioner and the Clerk to the Commissioner are not part of the Department of Planning and Development. However, the remainder of the Commissioner's staff are officers of that Department.

Functions

Briefly, the function of the Commissioner is to approve municipal planning schemes and to certify that subdivision proposals are in accordance with these schemes and meet the other requirements as laid down in the *Local Government Act 1962*. Also the Commissioner may require: (i) any municipality to prepare a planning scheme; or (ii) two or more municipalities to co-operate in the preparation of a master planning scheme; he is empowered to specify the completion date for such schemes. If the municipality fails to comply with the Commissioner's requests, then the Commissioner may prepare a scheme, the municipality meeting all preparation costs. A municipality may voluntarily prepare a planning scheme and submit it to the Commissioner for approval. If a scheme, prepared for an area to which a master plan

applies, is submitted to the Commissioner for approval then the Commissioner, before giving a decision, must consult the authority which prepared the master plan. The Commissioner is also empowered to deal with objections to any planning scheme, including master plans prepared by a master planning authority.

Legal Procedure for a Planning Scheme

After the Commissioner gives provisional approval to a planning scheme the municipality must make public the scheme and place a copy in the municipal office for public inspection. Following public notification a three months period is allowed for objections to the scheme by: (i) any owner or occupier of rateable property in the area affected; (ii) health officers as defined in the *Public Health Act 1962*; (iii) the municipality, but only if the scheme has been altered or prepared by the Commissioner. Objections are lodged with the municipality which then forwards the objections, together with a statement of its opinion on them, to the Commissioner for his consideration. The Commissioner hears and determines all the objections except in such cases where he considers the objection sound and the municipality agrees with it. The municipality may request and be entitled to a formal hearing.

If, because of the number and magnitude of objections to a planning scheme, the Commissioner considers it should be substantially modified, he may: (i) recommend that the Minister reject it; or (ii) direct that a specified part of the scheme be revised. In both of these cases another scheme or part scheme has to be prepared and submitted to the Commissioner for provisional approval.

After all objections have been dealt with and the necessary modifications made to the plan, the Commissioner, with the Minister's approval, approves and seals the scheme. The sealed scheme is then publicly notified, placed before both Houses of Parliament and recorded in the central plan register.

Scope of Plan

A town and country planning scheme may deal with the following planning matters: (i) all roads (public and private), streets, footpaths, building lines and land adjacent to foreshores—the plan should cover both alteration to existing roads, streets, etc. and proposed new roads, streets, etc.; (ii) positioning of buildings and the general nature and design of buildings; (iii) preservation of land for afforestation, recreation and open spaces; (iv) preservation of objects of historical or natural interest; (v) sewerage and drainage; (vi) lighting and water supply systems; (vii) specification of the use to which areas may be put; (viii) provision of amenities; (ix) stages of development; and (x) ancillary or consequential works.

Subdivision Approvals

Except where the Commissioner authorises a council or master planning authority to deal with subdivision plans, all such plans submitted to the council must be forwarded to the Commissioner for approval. (At any time, a council's power to authorise subdivision plans without reference to the Commissioner may be withdrawn by him.) When considering subdivision plans the Commissioner may: (i) call for an amendment that either the council requires or the Commissioner considers the principles of town and country planning demand; or (ii) refuse consent to the council approval. The Commissioner is to ensure that areas for public use are retained along sea and lake shores and rivers and rivulets.

Proposed State Planning Commission

Legislation to provide for the establishment of a State Planning Commission with responsibility for the preparation of a State Strategic Policy Plan and powers to effect a co-ordination of development was passed by the House of Assembly late in 1975. Early in 1976 this was referred to a Select Committee by the Legislative Council.

The Select Committee sat on a total of 19 occasions and received evidence from 87 witnesses in Tasmania, Victoria and South Australia. However, the Bill, and the Committee, lapsed when Parliament was prorogued in November 1976. Although the Committee was re-appointed in March 1977 and continued its inquiries, a change of policy by the Government occurred. The Bill was not revived, the Select Committee's terms of reference became invalid and its inquiries therefore had no relevance.

Tasmanian State Strategy Plan

A draft report on the plan was tabled in Parliament in March 1977. A summary of recommendations made, together with brief details of the objectives and functioning of the task force are included in Chapter 18 of the 1978 *Tasmanian Year Book*.

Planning Appeal Board

The Planning Appeal Board consists of a Chairman, who must be a legal practitioner or barrister, and two other members, at least one of whom must be experienced in town and country planning. Persons affected by the decisions of a local government authority in approving or refusing planning approvals may appeal to the Planning Appeal Board. The Board's determination of an appeal must be given effect to by the municipality. Its decision is conclusive and binds all parties to the appeal. Notices of appeal must be lodged with the Clerk to the Commissioner for Town and Country Planning.

Regional Planning Authorities

By special legislation enacted in December 1977, the Southern Metropolitan Planning Authority was reconstituted, comprising one representative of each of the Cities of Hobart and Glenorchy, the Municipalities of Brighton, Clarence and Kingborough and the Marine Board of Hobart, and one representative appointed by the State Government.

The State Government now subsidises each of the three Regional Planning Authorities (i.e. the Southern Metropolitan Planning Authority, the Tamar Regional Master Planning Authority, and the North-West Master Planning Authority) on a dollar for dollar basis by matching the amount contributed by their constituent members. In return for this assistance each Authority is required to undertake planning studies and administer rural subdivision controls delegated to it by the Town and Country Planning Commissioner. The subdivision powers are administered within the context of a guideline policy handed down to each Authority by the Commissioner.

State Planning Co-ordination Council

The State Planning Co-ordination Council, which was first constituted in 1977, comprises the Premier (as Chairman), the Deputy Premier, the Minister for Municipal Planning and the Minister for the Environment together with 11 heads of Departments. It functions as a co-ordinating and policy advisory body on major planning and development issues. It is serviced by the Commissioner for Town and Country Planning as Executive Director and the Clerk to the Commissioner who acts as Secretary.

State Planning Advisory Panel

The State Planning Advisory Panel was also constituted in 1977 and functions as a complementary body to the State Planning Co-ordination Council. It is chaired by the Premier and its membership includes the Minister for the Environment and 17 persons drawn from the private sector. The Commissioner for Town and Country Planning acts as Executive Director of the Advisory Panel and the Clerk to the Commissioner as its Secretary.

Southern Metropolitan Master Planning Authority*Introduction*

The Southern Metropolitan Master Planning Authority is responsible for planning the development of an area best defined broadly as a triangle based on Pontville (Brighton Municipality), Snug (Kingborough Municipality) and Seven Mile Beach (Clarence Municipality), which includes the City of Glenorchy and also those parts of Brighton, Kingborough and Clarence Municipalities which are likely, in the future, to experience urban expansion because of their proximity to Hobart.

Representation and Finance

The *Local Government Act* 1962 prescribes that each city shall have the right to appoint three representatives, and each municipality two representatives, to the Authority. The Authority is empowered to make contracts, accept trusts of properties for town planning purposes, make by-laws for domestic purposes and obtain a town planning contribution based on the assessed annual value of all rateable property.

In March 1973 the Hobart City Council petitioned to withdraw from the Authority. At a meeting of the Authority in April it was decided to: (i) recommend to member councils that

the Authority be continued; and (ii) advise the Hobart City Council that the Authority was prepared to continue to meet Hobart's mapping requirements, subject to a satisfactory financial arrangement being agreed to. Hobart withdrew from the Authority in August 1973.

Functions of the Authority

The main functions of the Authority are: (i) the technical and legal preparation of a master plan for the prescribed area (the detailed planning nevertheless remaining the responsibility of each constituent municipality or city); (ii) the conduct of surveys and studies to facilitate the preparation of the master plan; and (iii) preparation of maps of the developed and developing parts of the metropolitan area.

The Master Plan

The Master Plan 1962 was put up for statutory exhibition for a compulsory period of three months. Following objections the Authority withdrew the plan and the State Government decided to undertake a full transportation study, the results of which became available late in 1964. An interim 'Town Planning Policies Map 1964' was issued as a guide to member councils in their detailed planning and to other authorities concerned with development in the Southern Metropolitan Area.

Strategy Plan

In March 1975 the State Planning Co-ordinator issued a brief to the Authority for the preparation of a Hobart Metropolitan Area Strategy Plan. This Plan was developed in conjunction with the preparation of the State Strategy Plan and presented alternative growth form strategies and an assessment of their planning implications for the metropolitan area. For the purposes of this Plan the functional metropolitan area was considered to include urban parts of the City of Hobart and the Municipalities of New Norfolk, Richmond and Sorell which are not within the area under the authority of the Southern Metropolitan Master Planning Authority. It was intended that the Strategy Plan would form the basis for a Regional Structure Plan as required by the proposed Planning and Development Act.

Tamar Regional Master Planning Authority

The Tamar Regional Master Planning Authority was established in September 1969, following a petition to the State Government by the City of Launceston and the Municipalities of Beaconsfield, George Town, Lilydale, Longford and St Leonards. Westbury and Evandale, two essentially rural municipalities, became members in April 1974 to complete the membership of the natural region. In 1978, the Port of Launceston Authority became a constituent member.

The Authority consists of three representatives from the Launceston City Council and two from each of the other member authorities. Financial support is given by the constituent councils, in proportion to the annual value of rateable property.

Regional Plan

Initially, a consortium of town planning consultants was engaged to produce a preliminary report which was completed in mid-1971. This report formed the basis for the Regional Plan for the area, which was prepared by the Authority's staff. The aim of the constituent councils in the preparation of the Regional Plan was the unified promotion and development of the Tamar Valley region. The Plan was prepared under three principal objectives—planning, environmental and promotional.

The planning objective proposed four principal divisions aligned north to south along the Tamar and South Esk Rivers:

- (i) *Northern Tamar*—centred on the port of Bell Bay with the principal theme being the development of industrial potential and port facilities.
- (ii) *Central Tamar*—extending from Moriarty Reach to Dilston; to be promoted as a recreation and tourist area with the preservation of the existing scenic landscape character.
- (iii) *Southern Tamar*—centred upon Launceston with provision for the retention and further development of the City as the commercial and service centre of the region.

- (iv) *Esk Valley*—rationalisation of transport links and industries, and the promotion of the area's intensive agricultural potential.

The major regional planning policies were completed in 1974, and adopted by the constituent councils. During 1975 the final adopted policies were compiled into a strategic planning policy and submitted for Government approval.

The current major activities of the Authority concern the preparation of planning schemes and outline development plans for councils. The Authority administers rural subdivision controls delegated to it by the Town and Country Planning Commission.

The Authority has undertaken the following major planning studies: (i) Tamar Outline Development Plan, 1971; (ii) Tamar Tourist Development Plan, 1973; (iii) Tamar Region Plan, 1975; (iv) Tamar Estuary—River Management Plan, 1975; (v) Tamar Engineering Services Study, 1975; (vi) Tamar Sewerage Strategy Study; (vii) North-East Tasmania Regional Recreation Plan; and (viii) North-East Tasmania Region Study for the State Strategy Plan.

The Authority is also involved in industrial and employment promotion studies and activities of the Tamar Region. Some of these have been: (i) a survey of Secondary Industry in the Tamar Region, 1973; (ii) a strategy for employment promotion in the Tamar Region, 1976; (iii) Potential Employment Opportunities in the Tamar Region, 1976; and (iv) joint production of the film "Tamar, The Living Valley".

The Authority encouraged the establishment of the Australian Maritime College in Launceston. It has given evidence at committees of inquiry, such as investigations into town and country planning, forest regeneration, pollution, transport, land tenure, population, the national estate and education.

North-West Master Planning Authority

This Authority was constituted in February 1971 in accordance with provisions of the *Local Government Act 1962*. The eight member municipalities are Latrobe, Kentish, Devonport, Ulverstone, Penguin, Burnie, Wynyard and Circular Head. Constituent councils each have two members on the Authority. Finance is obtained from member municipalities in proportion to the annual value of rateable property.

Approximately 9 000 square kilometres in area and containing a population of some 90 000, the Authority's sphere of jurisdiction includes two interstate airports, three marine board port facilities, substantial industrial establishments with international markets, nine principal towns with two approaching city-status, and prime soil districts supporting livestock and vegetable production.

The fundamental objective of the Authority is to foster, co-ordinate, and promote the development of the region along sound economic and environmental lines. Under State legislation, it has the responsibility to prepare a statutory master plan for the region.

An initial policy adopted by the Authority was to inhibit further linear expansion along the coast and to focus development inwards from the existing urban nodes, with the rural landscape in between serving as punctuating relief. This has been schematically illustrated in an Outline Development Strategy Map and Report released in November 1974. The Authority has also endorsed the concept of Burnie being the cultural and arts centre for the north-west and west coasts of Tasmania as a regional complement to the major facilities provided in Launceston. In addition, concerted support has been accorded the unique and ambitious 9 000-hectare Dial Regional Sports/Recreation Complex now being implemented in the central location of Penguin.

Further References

ABS Publications

Local Government Finance, Tasmania (5501-6) (annual, 1976-77 issue released 14-6-78).

Australian Municipal Information System (AMIS) Manual (1103-0) (irregular, latest issue released in March 1977—this Manual describes the AMIS computer data base system which contains a range of data on a comparable basis for all Australian local government areas. Output from the system is available on request).

Public Authority Finance: State and Local Authorities (5504-0) (annual, Canberra Office publication, 1975-76 released 27-1-78).

Other Publications

Report of the Auditor-General and the Statement of Public Accounts (published annually by the Tasmanian Government Printer, Hobart).

Chapter 5

PUBLIC FINANCE

FEDERAL AND STATE GOVERNMENT

Change in Relationship Since 1901

Prior to the establishment of the Commonwealth in 1901, the individual states exercised complete autonomy with respect to their raising of revenue and the manner in which this was spent. Due to developments since Federation, the states now have only limited ability to raise the money required for revenue and capital purposes. State revenue is now supplemented by substantial grants from the Federal Government and the raising of loans is under the control of the Australian Loan Council, a body set up under Federal legislation. The emergence of the Federal Government as the dominating influence in the financial transactions of the state governments can be traced to three events:

- (i) Under the Constitution the states surrendered the right to levy customs and excise duties, which passed exclusively to the Federal Government.
- (ii) Under the 1927 Financial Agreement, the Australian Loan Council became the borrowing agent for the states.
- (iii) During World War II, under the uniform tax scheme, the Federal Government became the sole authority levying taxes upon the income of persons and companies. (Introduction of new federal-state income tax sharing arrangements from 1977-78 has given each state the right to impose a surcharge or grant a rebate on personal income tax levied in its state.)

The result of these changed relationships can be summarised as follows: (i) the Federal Government, with two votes plus a casting vote as against one vote for each of the states, exercises a substantial degree of control over the Australian Loan Council and, consequently, over public investment in government securities; (ii) to carry out functions for which their revenue is inadequate, the states have become heavily dependent on the Federal Government for general and specific grants. The Federal Government is therefore placed in a position to exercise a substantial degree of control over the ordinary public expenditure of the states.

Principal Activities of the States

The Federal Constitution lists the matters over which the Federal Parliament has power to legislate. Some of those powers are given exclusively to the Federal Government (e.g. defence, customs and excise) but, in many matters, the Federal and State Governments have concurrent powers, federal law prevailing where there is conflict. Matters other than those listed in the Constitution remain the concern of the states. Principal government activity at state level embraces education, health and welfare services, the development of internal resources, land settlement, soil conservation, maintenance of law and order and the provision of public utility services such as roads, electricity, public transport and water supply. Such activities are undertaken either by state departments or by statutory and local government bodies created under state legislation. Apart from charges for services (where charges can be levied) the most obvious form of revenue for the discharge of these functions is state taxation but the Federal Government exercises a practical monopoly over the more lucrative tax sources (e.g. customs and excise, income tax, sales tax). A responsibility therefore rests on the Federal Government to supplement state revenues.

Federal Government Payments To or For Tasmania

Summary of Federal Government Payments

In the following sections the main forms of Federal Government assistance are described; the following table shows the total annual payments to Tasmania from the Federal Government's Consolidated Revenue Fund:

Federal Government Payments To or For Tasmania
(\$'000)

Particulars	1974-75	1975-76	1976-77
GENERAL PURPOSE FUNDS			
Financial assistance grants (a)	140 204	156 816	-
Personal income tax entitlement (b)			186 294
Capital grants	25 977	30 372	31 901
Total	166 181	187 188	218 195
SPECIFIC PURPOSE PAYMENTS			
Revenue payments—			
Payments under financial agreement—			
Interest on State debt	534	534	534
Sinking fund on State debt	2 141	2 100	2 069
Debt charges assistance	3 975	-	-
Universities	12 274	13 658	16 427
Colleges of advanced education	6 888	7 011	8 678
Technical and further education	426	1 087	969
Schools	5 912	9 327	11 049
Pre-schools and child care	1 017	1 720	2 006
Public hospitals (Medibank)	-	31 000	18 918
Community health	528	1 265	2 038
School dental scheme	1 239	1 547	1 475
Unemployment relief	1 103	700	-
Regional employment development scheme	534	1 521	-
Tasman Bridge disaster	456	1 400	1 715
Assistance for local government	1 669	2 292	4 004
Other	4 446	5 294	4 051
Total revenue payments	43 142	80 456	73 933
Capital payments—			
Universities	1 279	2 589	573
Colleges of advanced education	2 969	5 313	404
Technical training	471	887	1 665
Schools	6 091	4 477	4 266
Pre-schools and child care	1 177	1 764	5
Hospitals	1 500	2 090	3 000
Housing advances	26 220	22 220	24 220
Roads	18 585	20 097	20 716
Sewerage	2 221	1 984	500
Tasman Bridge disaster	5 544	16 300	13 785
Assistance to primary industry	2 569	3 354	2 419
Other	4 964	7 043	3 958
Total capital payments	73 590	88 118	75 511
Total specific purposes payments	116 732	168 574	149 444
GENERAL AND SPECIFIC PURPOSE PAYMENTS			
Total payments (c)	282 913	355 762	367 639
Percentage increase (d)	55.4	25.8	3.3

(a) Includes special financial assistance grants: 1974-75, \$8 333 000; 1975-76, nil; 1976-77, nil.

(b) Financial assistance grants have been replaced by personal income tax entitlements from 1976-77; see later section 'Personal Income Tax Sharing with the States'.

(c) This total cannot be identified as such in state accounts since part is taken into Consolidated Revenue Fund, part into Loan Fund, and the balance into Trust and Special Funds.

(d) Over previous year.

Financial Assistance Grants

Under the *Federal States Grants (Income Tax Reimbursement) Act 1942* the states received general revenue grants for vacating the field of income tax. Various formulae were used to calculate each state's grant. From 1959 to 1975-76 the method was to annually increase the grant by multiplying the previous year's grant by: (i) the state's percentage increase in population; (ii) the percentage increase in average wages for Australia; and (iii) a betterment factor. The betterment factor was: 1.2 per cent from 1965-66 to 1970-71; 1.8 per cent from 1971-72 to 1975-76; and 3.0 per cent for 1976-77. The following table shows amounts received as financial assistance grants for the last ten years:

Financial Assistance Grants (a): Receipts by Tasmania
(\$'000)

Year	Amount	Year	Amount
1966-67	34 773	1971-72	71 673
1967-68	37 968	1972-73	79 498
1968-69	42 209	1973-74	92 451
1969-70	48 514	1974-75	140 204
1970-71	67 088	1975-76	(b) 156 816

(a) From 1976-77 financial assistance grants were replaced by the personal income tax entitlement; see next section.

(b) When determining the 1975-76 grant a reduction was made because of the transfer of the Tasmanian Government Railways to Commonwealth ownership.

Personal Income Tax Sharing with the States

Commencing in 1976-77 financial assistance grants were replaced by personal income tax sharing arrangements between the Commonwealth and the states. This was a central element in the 'new federalism' policy of the Fraser Coalition Government. The income tax sharing between the Commonwealth and states was introduced in two stages. The first stage became operative in 1976-77; the second stage required further Commonwealth and state legislation. Federal legislation for Stage 2 was passed during 1977-78.

The principal elements of Stage 1 are:

- (i) The states receive a given percentage (33.6) of net personal income tax collections for a particular year. The yield or cost of special surcharges or rebates applied by the Commonwealth are excluded from the base.
- (ii) For the first four years of the scheme (1976-77 to 1979-80) the Commonwealth has guaranteed that no state will receive less than it would have under the old financial assistance grant formula.
- (iii) The total entitlement for all states is first decided. The amount is then divided between each of the states on the basis of each state's population and a relativity factor based on 1975-76 financial assistance grant receipts.
- (iv) The four less populous states can continue to apply for special grants in addition to their basic income tax sharing entitlements.
- (v) There will be periodic reviews of relativities between states.

In 1976-77 Tasmania received \$186 294 000 under the new system. The actual calculated share was \$181 358 000 but, under the old financial assistance grants formula, Tasmania would have received \$186 294 000. (State receipts equal to receipts under the financial assistance grants formula are guaranteed for the first four years of Stage 1.)

Under Stage 2 each state may legislate to impose a surcharge on personal income tax in the state or to give a rebate of personal income tax payable under Commonwealth law. The state bears the cost of any such rebate. The Commonwealth will collect or grant the rebate as the state's agent. In the case of a surcharge levied by one of the less populous states the Commonwealth will make equalisation arrangements. These will ensure that the state will get the same relative advantage from the surcharge as a state with a broader personal income tax base.

Special Grants (Section 96 of the Constitution)

Section 96 of the Constitution reads: 'During a period of ten years after the establishment of the Commonwealth and thereafter until the Parliament otherwise provides, the Parliament

may grant financial assistance to any state on such terms and conditions as the Parliament thinks fit.'

The Commonwealth Grants Commission was established in 1933 and consists of three members on a part-time basis assisted by a full-time staff. In its third report (1936) it fixed upon the principle of financial need, which was expressed in the following terms: 'Special grants are justified when a state through financial stress from any cause is unable efficiently to discharge its functions as a member of the federation and should be determined by the amount of help found necessary to make it possible for that state by reasonable effort to function at a standard not appreciably below that of other states'. In arriving at its recommendations, the Commission each year makes a detailed comparison of the budget results of the claimant states with those of the non-claimant states.

Prior to the passage of the *Federal States Grants Act 1959*, the claimant states had been Tasmania, W.A. and S.A. The new formula evolved under the *States Grants Act 1959* had been devised partly in reaction to a claim by Victoria and Queensland to be also considered as claimant states; in effect, the new scale of increased grants under this legislation resulted in the number of claimant states falling to two, W.A. and Tasmania. The Grants Commission could then have used the accounts of the four non-claimant states to reach a basis for comparison; it finally decided to adopt a two-state standard, based on the budgets of N.S.W. and Victoria. Recent developments have included: (i) the withdrawal of W.A. as a claimant state from 1968-69; (ii) the acceptance of S.A. as a claimant state from 1970-71; (iii) the acceptance of Queensland as a claimant state from 1971-72; and (iv) the withdrawal of Tasmania as a claimant state from 1974-75.

On 11 June 1974 the Premier announced Tasmania's withdrawal as a claimant state for a Special Grant under Section 96 of the Commonwealth Constitution. The announcement was of historic significance for the State for two reasons:

- (i) In 1912-13 Tasmania first obtained a Special Grant under Section 96 of the Commonwealth Constitution and from that time until 1973-74 had received a special grant each year.
- (ii) In 1933 the Grants Commission was established to examine the claims of states requesting special grants to assist their revenues. From 1933 until 1973-74 Tasmania had had a continuous association with the Grants Commission and its determinations had considerably influenced the State Government's financial policies.

Tasmania's withdrawal from the Grants Commission's Special Grants procedures became operative for the 1974-75 financial year. The withdrawal gives the State Treasurer greater freedom in planning the State's finances; however, some of the protection afforded by the special grant against any sudden unexpected deterioration of the State's financial position is lost.

The financial arrangement for the withdrawal was that \$15m would be added to the State's Financial Assistance Grant for 1974-75 and that the total receipt, including the \$15m, would become the base for calculating the 1975-76 Financial Assistance Grant. Also, as part of the withdrawal arrangement, Tasmania's 1972-73 and 1973-74 advance special grants were not subject to final adjustment.

For details of the method by which Special Financial Assistance Grants were paid to Tasmania, reference should be made to Year Books prior to the 1976 edition.

Payments Under the Financial Agreement (1927)

Under the Financial Agreement, which was entered into by the Federal Government and the states in 1927, the Federal Government contributes towards sinking fund payments in respect of state debts existing at 30 June 1927, and towards sinking fund payments in respect of state debts incurred after that date for purposes other than the funding of revenue deficits. The Federal Government's contribution to Tasmania to assist with the payment of interest on State debt was set at an annual sum of \$533 718, to continue until 1985.

The sinking fund contributions made by the Federal Government under the Agreement in respect of state debts vary according to the date and nature of the borrowings. On state debts existing at 30 June 1927 the Federal Government is making sinking fund contributions at the rate of 0.125 per cent a year until 1985 and in respect of cash loans raised for the states since that date, the Federal Government makes sinking fund payments for 53 years at the

annual rate of 0.25 per cent. Each state is obliged to make sinking fund payments for corresponding periods at the rate of 0.25 per cent per annum regardless of the date on which the debt was incurred. The only exception is in relation to debt incurred for the purpose of funding revenue deficits. In these instances, the Federal Government makes no sinking fund contributions and the states are obliged to make annual contributions to the sinking fund of not less than four per cent. However, in respect of Treasury Bills issued to cover states' revenue deficits accruing between July 1927 and June 1935, special arrangements were made under which the Federal Government contributes 0.25 per cent per annum on the amount outstanding until June 1983.

Recent Federal Government sinking fund contributions in respect of the Tasmanian public debt are shown in the following table:

Federal Government Contributions to National Debt Sinking Fund: Tasmanian Debt
(\$'000)

Year	Amount	Year	Amount
1971-72	1 825	1974-75	2 141
1972-73	1 934	1975-76	2 100
1973-74	2 044	1976-77	2 069

The acceptance of some Federal Government liability for interest and sinking fund payments on state debts was only one part of a more extensive agreement setting up an Australian Loan Council and a National Debt Sinking Fund. The raising of loan money for the states under the Agreement is described later in this chapter.

New Assistance for Debt Charges

At the 1970 February Premiers' Conference, the Federal Government announced it was prepared to take over state debt totalling \$1 000m during the five-year period 1970-71 to 1974-75. However, this would have necessitated amendments to the 1927 Financial Agreement and caused considerable delay. The Federal Government then proposed an alternative which involved grants to the states equal to interest on specific parcels of state debt. The distribution between the states was in proportion to Federal Government securities on issue on behalf of each state at 30 June 1978.

The 1927 Financial Agreement brought into effect by the *Financial Agreement Act 1928* was amended during 1975-76 with retrospective effect from 30 June 1975. The total of \$1 000 million of state debt was formally transferred to the Commonwealth.

To assist the states in meeting their capital works programs since 1970-71, the Federal Government has provided annual grants for financing non-reproductive capital works. Total approved borrowing programs from 1971-72 to 1976-77 have been (in \$m): 1971-72, 892; 1972-73, 982; 1973-74, 867; 1974-75, 1 087; 1975-76, 1 291; and 1976-77, 1 356. The proportion of the total states' capital works program provided by Federal Government grants in this period has been: 1971-72, 24.6 per cent; 1972-73, 25.3; 1973-74, 32.1; 1974-75, 32.1; and 33.3 for 1975-76 and 1976-77. For 1977-78 the proportion will again be 33.3 per cent. Changes in the composition of total state capital works programs have occurred during this period: (i) 1971-72 and 1972-73 figures include borrowings for state housing; (ii) from 1973-74, figures exclude borrowings for welfare housing and from 1 January 1974 tertiary education—the latter has become a Federal Government function following an agreement at the June 1973 Premiers' Conference.

Distribution of the grants was by agreement between the states or by the Federal Government if the states fail to reach agreement. Tasmania's share of the 1976-77 grant was \$31.90m which was credited to the State's Loan Fund. Expected capital grant receipts for 1977-78 for Tasmania are \$33.50m and expected borrowings for new capital purposes are \$66.99m.

The provision of these grants reduces the amount which the State needs to borrow in order to carry out its capital works program. The result of this decrease in the amount

borrowed means that the burden of debt charges (interest payments and sinking fund contributions) on the Consolidated Revenue Fund is eased.

Federal Government Aid for Roads

Arrangements for the financing of road expenditure are embodied in three separate Federal Acts—the *National Roads Act 1974*, the *Roads Grants Act 1974* and the *Transport (Planning and Research) Act 1974*. These Acts cover the period 1974-75 to 1976-77 and legislation has extended the period of the *Transport (Planning and Research) Act 1974* for a further three years to 1979-80. (For historical information on road financing, reference should be made to the 1977 and earlier Year Books.)

Under the *National Roads Act 1974*, grants are allocated to the states to meet the total cost of approved construction and maintenance of declared national highways. Grants are also provided, on the same basis, for roads which have been classified as important for facilitating trade and commerce between states and with other countries. At this stage, declared roads are those classified as such by the Commonwealth Bureau of Roads in its 'Report on Roads in Australia 1973'. The *Roads Grants Act 1974* provides grants for roads not covered by the *National Roads Act 1974*. Various classifications are used and amounts granted separately toward rural arterial and developmental roads, beef roads, urban local roads, rural local roads and minor traffic engineering and road safety improvements. The *Transport (Planning and Research) Act 1974* provides for grants to meet two thirds of the cost of approved planning and research projects in relation to roads and urban public transport. The balance is to be allocated to projects irrespective of which state is involved, where each proposed project will compete for available funds. Provision has been made for the transfer of amounts between the various categories and the various Acts provided that over the three-year period, expenditure of grants on each classification does not exceed the total provided under the appropriate Act.

To qualify for a grant under these Acts, annual minimum quotas have been set specifying the expenditure on roads which each state must make from its own resources. Provision has been made for the carry forward of excesses or deficiencies in expenditure from state resources when determining if a quota has been met.

Since 1974, grants in addition to those specified have been provided. In 1974-75, \$30m was provided under the *National Roads Act 1974* and the *Road Grants Act 1974*, to assist employment in the building and maintenance of roads. In 1975-76 an additional \$64m was granted to offset the higher than expected cost escalation effects on the 1975-76 road appropriations. This grant was authorised by the *Roads Acts Amendment Act 1976*.

Details of Tasmanian receipts of Federal Government contributions in respect of road expenditure are shown in the following table:

Federal Government Aid for Roads: Receipts by Tasmania
(\$'000)

Year	Amount	Year	Amount	Year	Amount
1968-69	8 500	1971-72	10 820	1974-75	18 585
1969-70	9 100	1972-73	12 150	1975-76	20 097
1970-71	10 230	1973-74	13 950	1976-77	20 716

(a) Payment under the *Commonwealth Aid Roads Act 1959* was \$4.2m; the balance represents a final adjustment of Federal Government commitments under previous legislation.

Loan Council (Financial Agreement)

The original Financial Agreement was made on 12 December 1927, but Tasmania did not become a party to it until 1 July 1928. The basic intention of the agreement was a co-ordinated approach to the loan market, the establishment of sound sinking fund arrangements and the sharing of state debt charges with the Federal Government. The main provisions are summarised below:

- (i) The Federal Government assumed certain liabilities in respect of state debts (see previous section on interest and sinking fund payments made by the

Federal Government in respect of Tasmanian State debt—'Payments under the Financial Agreement 1927').

- (ii) The Australian Loan Council was set up to co-ordinate the public borrowings of the Federal Government and the states. It consists of the Prime Minister (or his nominee) as chairman, and the state premiers (or their nominees). Each financial year the Federal Government and the states submit programs to the Loan Council setting out the amounts they desire to raise by loan during the next year. Revenue deficits to be funded are included in the borrowing programs but borrowing by the Federal Government for defence purposes is excluded from the terms of the agreement.

If the Loan Council decides that the total amount of the loan programs for the year cannot be borrowed at reasonable rates and conditions, it then decides the amount which shall be borrowed and may, by unanimous decision, allocate that amount between the Federal Government and the states. In default of a unanimous decision, the Federal Government is entitled to one-fifth of the total amount to be borrowed and each state to a proportion of the remainder equal to the ratio of its net loan expenditure in the preceding five years to the net loan expenditure of all states during the same period.

Subject to the decisions of the Loan Council the Federal Government arranges all borrowings, including those for conversions, renewals and redemptions. However, the Federal Government or a state may borrow for 'temporary purposes' by way of overdraft or fixed deposit, subject to limits fixed by the Loan Council. In addition, the Federal Government may borrow within Australia, or a state within its own territory, from authorities, bodies, institutions, or from the public by counter sales of securities, subject to Loan Council approval. Federal Government securities are issued for money borrowed in this way and amounts so borrowed are treated as part of the borrowing program for the year.

- (iii) The agreement involved setting up a National Debt Commission to administer one consolidated sinking fund in respect of the debt of the Federal Government and the states. Sinking fund moneys are used to redeem unconverted securities at maturity and to re-purchase securities on the stock market.
- (iv) It was realised at the inception of the Loan Council that, in the interests of co-ordinated borrowing, the Council should be advised of borrowings of large amounts by semi-government authorities (such loan raisings do not form part of state or Federal Government debt and therefore are not within the scope of the original agreement). A set of rules evolved in 1936 is regarded as the 'Gentlemen's Agreement' and makes provision for the submission to the Council of annual loan programs in respect of larger semi-government and local government authorities (in conjunction with the loan programs of the governments concerned) and for the fixing of the terms of individual loans coming within the scope of the annual program. For 1976-77 larger authorities are those semi-government and local government authorities borrowing more than \$800 000 in a year. (For 1976-77 borrowings approved by the Loan Council for larger Tasmanian semi-government and local government authorities amounted to \$27 397 000.)

It should be emphasised that the Australian Loan Council does not itself raise money for Tasmanian semi-government and local government authorities; its concern is to assess the total impact of government borrowing for the year and then to fix ceilings for semi-government and local government authorities in the interests of a co-ordinated program.

The following table shows Loan Council borrowings undertaken on behalf of the State of Tasmania to finance new capital works and, for 1971-72 and 1972-73, housing:

Tasmania: New Cash Borrowings Authorised by Australian Loan Council (a)
(\$'000)

Year	Amount	Year	Amount	Year	Amount
1969-70	45 370	1972-73	(c) 51 252	1975-76	60 743
1970-71	(b) 34 570	1973-74	(d) 43 467	1976-77	63 802
1971-72	(c) 47 020	1974-75	54 952	1977-78	66 992

(a) For State works programs; amounts credited to State Loan Fund.

(b) Commencing in 1970-71 the Federal Government has provided capital grants to replace some amounts which would otherwise have been obtained as loan borrowings; hence the reduced amount in 1970-71.

(c) New cash borrowings for 1971-72 and 1972-73 include allocations for State housing.

(d) From 1973-74 excludes borrowings for State welfare housing and from 1 January 1974 for tertiary education.

For years prior to 1971-72 and from 1973-74, the previous table excludes allocations under the Federal Government and State Housing Agreements, which were also part of the Loan Council's program. The following table shows allocations to Tasmania for housing purposes:

Tasmania: Allocations for Housing
(\$'000)

Year	Amount	Year	Amount	Year	Amount
1968-69	7 500	1971-72	(a)	1974-75	26 369
1969-70	7 600	1972-73	(a)	1975-76	22 380
1970-71	8 700	1973-74	16 445	1976-77	24 226

(a) Allocations included with other borrowings in the previous table (1971-72, \$8.3m and 1972-73, \$9.1m).

STATE FINANCIAL TRANSACTIONS

Tasmanian Public Account

The State Public Account includes the Consolidated Revenue Fund, the Trust and Special Funds, and the Loan Fund. Revenue from State taxation, Federal Government financial assistance grants and other departmental sources is paid into the Consolidated Revenue Fund. Main expenditures from it are for education, health and hospitals, roads, law and order, public debt charges, and subsidies to State business undertakings. The Trust and Special Funds cover special transactions outside the ordinary operations of departmental expenditure, such as funds from the Federal Government for specific purposes and moneys held for expenditure by the State at some future time. The Loan Fund receives its funds from public borrowings and grants, and the main expenditure is on State public works and on advances to State business undertakings.

A summary of transactions on the Tasmanian Public Account is given in the following table:

Public Account: Summary of Transactions
(\$'000)

Particulars	1974-75	1975-76	1976-77
Cash and investments at beginning of year	8 852	6 518	29 189
Receipts—			
Consolidated Revenue Fund	268 522	(a) 322 091	396 617
Borrowings for new capital purposes	54 952	60 743	63 807
Other Loan Fund receipts	40 104	47 898	48 039
Net increase, Trust and Special Funds	-1 067	8 704	199
Total	362 510	439 436	508 662

Public Account: Summary of Transactions—continued
(\$'000)

Particulars	1974-75	1975-76	1976-77
Expenditure—			
Consolidated Revenue Fund	282 065	(a) 317 947	395 033
Loan Fund, public works and purposes	82 778	98 818	116 823
Discount	—	—	5
Total	364 844	416 765	511 861
Percentage increase	30.3	14.2	22.8
Cash and investments at end of year	6 518	29 189	25 989

(a) These amounts are as reported by the State Treasurer, and disagree slightly with figures used later in this chapter which have been adjusted for remissions of casino tax.

The State Public Account is a complete record of the Government's operation of three specific funds, i.e. Consolidated Revenue, the Trust and Special Funds, and the Loan Fund. It is by no means a complete record of government activity, since statutory authorities and semi-government authorities such as the Hydro-Electric Commission, Transport Commission and Agricultural Bank carry on financial operations which are not recorded in the State Public Account. In a later section of this chapter under the heading 'Exclusions from Consolidated Revenue', the relationship between the finances of the principal authorities and the Consolidated Revenue Fund is described; the general principle is that gross receipts and expenditure of the authorities are excluded from the Public Account.

In the following table are shown the balances credited to each fund constituting the Public Account and the form in which the balances are held:

Public Account: Summary of Balances at 30 June
(\$'000)

Year	Balance				Location			
	Accumulated Revenue Account	Loan Fund	Trust and Special Funds	Total	Cash in Treasury or bank	Advanced to departments	Govt. and other securities (a)	Total
1973	-6 586	2 810	11 224	7 448	3 467	905	3 075	7 448
1974	-7 282	2 490	13 643	8 852	2 359	931	5 562	8 852
1975	-13 544	7 486	12 576	6 518	3 295	970	2 253	6 518
1976	-9 400	17 308	21 280	29 189	4 696	1 423	23 069	29 189
1977	+1 583	2 926	21 479	25 989	1 655	1 411	22 923	25 989

(a) Includes fixed deposits.

In the previous table, 'Accumulated Revenue Account' is a suspense account recording accumulated surpluses and deficits in the Consolidated Revenue Fund, and also the funding of deficits. Details of the account are as follows:

Accumulated Revenue Account: Summary of Transactions
(\$'000)

Year	Opening balance	Transactions			Closing balance
		Budget result, Consolidated Revenue	Special grant adjustment (a)	Deficits charged to Loan Fund (b)	
1972-73	-2 433	-4 132	-2 400	+2 378	-6 586
1973-74	-6 586	-3 150	-1 350	+3 805	-7 282
1974-75	-7 282	-13 544	—	+7 282	-13 544
1975-76	-13 544	+4 144	—	—	-9 400
1976-77	-9 400	+1 583	—	+9 400	+1 583

(a) It is Tasmanian Treasury practice to record special grant adjustments in the Accumulated Revenue Account and to include, in published Consolidated Revenue receipts, only the advance grant as determined by the Commonwealth Grants Commission.

(b) See later section in this chapter 'Deficit Funding'.

In the following section dealing with Consolidated Revenue, Treasury practice of eliminating special grant adjustments from Consolidated Revenue total receipts has been followed.

Consolidated Revenue Fund

General

The financial transactions of the State of Tasmania are recorded under: (i) Consolidated Revenue; (ii) Trust Funds; and (iii) Loan Fund.

Payments from Consolidated Revenue are made only on the basis of authority found in: (i) the annual Appropriation Act of the Parliament; (ii) Acts of the Parliament made in previous years and under which certain annual payments are classified as 'reserved by law'; and (iii) the *Public Account Act* 1957 (as amended in 1962) and the *Audit Act* 1918.

The third category of authority listed above is designed to give the Treasurer and the Government some flexibility in public expenditure since the *Appropriation Act* cannot be expected to anticipate, to the nearest dollar, the expenses that are likely to be incurred for each and every item. The relevant sections of the amended *Public Account Act* are 5A and 5B which provide that, in relation to Consolidated Revenue, the Treasurer may authorise transfers between votes within certain sub-divisions of the appropriation and, on the authority of the Governor, supplement certain appropriations and provide funds to meet expenditure for which no other provision exists. Transfers, as described under 5A, are a matter for the Treasurer but additional expenditure, as described under 5B needs ratification by Parliament before the close of the following financial year. Regulations 20 and 21 of the second schedule of the *Audit Act* provide for expenditure by the Treasurer to meet emergencies for which no vote exists; the Governor must first authorise such expenditure and the Auditor-General investigate the circumstances before payment can be made.

Exclusions from Consolidated Revenue

It should be observed that the Consolidated Revenue Fund does not include all revenue and expenditure in respect of activities undertaken or authorised by the State Government. Some moneys are paid directly into State Trust Funds; e.g. Federal Government assistance for roads is paid into the State Highways Trust Fund and the various expenditures on roads are made directly from that Fund. The gross receipts and payments of a number of State business undertakings and State authorities are excluded from the Consolidated Revenue Fund, their relation to the Fund being as follows:

- (i) The *net* loss incurred by the Transport Commission each year is met from the Consolidated Revenue Fund. The Commission's net loss occurs principally in respect of government shipping services which it administers. The Commission's gross receipts and expenditure are excluded from the Fund.
- (ii) Omnibus services in Hobart, Launceston and Burnie are operated by the Metropolitan Transport Trust. The *net* annual loss of the authority is a charge against Consolidated Revenue. Annual payment of debt charges on Government advances is credited to the Fund.
- (iii) The gross receipts and expenditure of the Hydro-Electric Commission are excluded from the Consolidated Revenue Fund; however the annual payment of debt charges by the Commission is credited to the Fund. Net profit or loss on the Commission's activities is carried forward in the authority's own suspense account. From 1971-72 the Commission has been required to pay an annual contribution to Consolidated Revenue. The amount was five per cent of the total revenue derived from retail sales of electricity in the preceding year, until January 1977, when it was reduced to 2½ per cent and eventually eliminated from July 1977.
- (iv) Also excluded from the Consolidated Revenue Fund are the gross receipts and payments of: regional water schemes, Government Printing Office, Government Insurance Office, Public Trustee, State housing authorities, closer settlement, rural credits and other activities of the Agricultural Bank, etc. In accordance with various Acts, it is usual for the net profits or losses of the previous year to be paid to or from the Consolidated Revenue

Fund for the current year. Debt charges on Government money loaned to the authorities are paid to Consolidated Revenue.

Consolidated Revenue Fund—Summary

The following table shows the transactions of the Tasmanian Consolidated Revenue Fund, the surplus or deficit, and the aggregate deficit at the end of each year. It also calls attention to the special grant adjustments which were made up to 1971-72 and shows how these Federal Government payments modified the original budget result. As a consequence of Tasmania's withdrawal from the Grants Commission Special Grants procedures during 1973-74 no adjustments were made for 1972-73 and 1973-74 advance Special Grants. (Details are given earlier in this chapter.)

Consolidated Revenue Fund: Surpluses and Deficits (\$'000)

Year	Revenue			Expenditure	Budget result		Aggregate net deficit at end of year
	Before adjustment	Special grant adjustment	After adjustment		Before adjustment	After adjustment	
1971-72	157 782	-1 350	156 432	160 237	-2 455	-3 805	25 226
1972-73	181 866	-	181 866	185 998	-4 132		29 358
1973-74	206 947	-	206 947	210 097	-3 150		32 508
1974-75	268 522	-	268 522	282 065	-13 544		46 052
1975-76	(a) 322 091	-	322 091	(a) 317 947	(a) +4 144		41 908
1976-77	396 617	-	396 617	395 033	+1 583		40 325

(a) These amounts are as reported by the State Treasurer, and disagree slightly with figures used later in this chapter which have been adjusted for remissions of casino tax.

Deficit Funding

While the aggregate of all deficits at 30 June 1977 was \$40 325 000, the sum of \$41 908 000 has been charged against the Loan Fund as 'revenue deficits funded'; thus \$1 583 000 is carried as a positive balance in the Accumulated Revenue Account. Prior to 1972-73 the original budget result was treated as provisional because the Grants Commission's adjustment was used to amend the original surplus or deficit and also the aggregate deficit.

The next table shows the adjusted budget result for recent years and how the result was treated.

Consolidated Revenue Fund: Adjusted Budget Result and Treatment (\$'000)

Budget result			Budget result		
Year	Amount	Treatment	Year	Amount	Treatment
1971-72	-3 805	Funded	1974-75	-13 544	Funded
1972-73	-4 132	Funded	1975-76	+4 144	Offset
1973-74	-3 150	Funded	1976-77	+1 583	Offset

Consolidated Revenue Fund—Receipts

The following table shows Tasmanian Consolidated Revenue Fund receipts for recent years:

Consolidated Revenue Fund: Receipts
(\$'000)

Item	1974-75	1975-76	1976-77
Federal Government grants—			
Financial agreement	534	534	534
Income tax entitlement (a)	—	—	186 294
Financial assistance (a)	140 205	156 816	—
Debt charges assistance (b)	3 975	—	—
Education	3 867	8 501	11 269
Health r	4 146	(c) 20 023	(c) 32 454
Social welfare	421	458	599
Unemployment relief	1 100	700	—
Total	r 154 248	r 187 032	231 150
Debt charge recoveries (d)—			
Interest	32 452	33 835	42 215
Sinking fund	3 717	4 807	4 576
Total	36 169	38 641	46 791
State taxation (e)	60 456	74 691	88 045
Victorian lotteries agreement	301	331	1 065
Territorial revenue—			
Forestry	3 865	4 159	5 313
Other property income, etc.	2 231	2 926	4 737
Total	6 097	7 085	10 050
Departmental revenue, fees, etc.—			
Education	76	260	327
Health r	586	659	911
Law and order r	2 148	2 973	3 353
Tourism	854	1 061	1 064
Other (f)	7 588	9 029	13 861
Total r	11 252	13 982	19 516
Grand total	268 522	(g) 321 761	396 617
Percentage increase	29.8	19.8	23.3

(a) Personal income tax entitlements replaced financial assistance grants from 1976-77.

(b) Refer to earlier sections on assistance for debt charges.

(c) Includes receipts under the Medibank agreement, 1975-76, \$15 889 000; 1976-77, \$26 156 000.

(d) Mainly on advances made to semi-government authorities.

(e) See later section 'State Taxation'.

(f) Includes transfers from the Loan Fund and the State Highways Trust Fund relating to the Public Works Department of: for 1974-75, \$5.02m; 1975-76, \$5.50m; and 1976-77, \$6.24m.

(g) Remissions of casino tax of \$329 000 have been deducted from State taxation receipts; this total is consequently slightly less than that recorded by the State Treasurer. (For further explanation, see the section 'Casino Tax and Licence Fees' later in this chapter.)

The relative importance of the various components of the Consolidated Revenue Fund can be assessed by expressing them on a per capita basis using the State mean population for the relevant financial year.

Consolidated Revenue Fund: Receipts Per Head of Mean Population

Item	1974-75r (\$)	1975-76r (\$)	1976-77	
			Amount (\$)	Per cent
Federal Government grants	383.6	460.4	565.0	58.3
State taxation	150.4	183.9	215.2	22.2
Debt charge recoveries	90.0	95.1	114.4	11.8
Departmental revenue, fees, grants, etc.	28.0	34.4	47.7	4.9
Territorial revenue	15.2	17.4	24.6	2.5
Victorian lotteries agreement	0.7	0.8	2.6	0.3
Total	667.8	792.1	969.5	100.0

State Taxation

During 1976-77 the chief state taxes, in order of importance were: pay-roll tax; motor taxes; stamp duties (on cheques, legal documents, etc.); probate and succession duties; and land tax. Pay-roll tax, which was handed over to the State by the Federal Government from the 1971-72 financial year, has now become by far the largest single source of State tax revenue.

In the following tables, the figures shown for total taxes paid to Consolidated Revenue do not agree with those published by the State Treasurer. Excluded from the tables are amounts received from the Victorian Government under the Victorian Lotteries Agreement while 'motor taxes' includes amounts not treated as taxes by the State Treasurer. The following table gives a summary for a three-year period, of State taxation taken into the Consolidated Revenue Fund:

State Taxation Collections Paid into Consolidated Revenue

Tax or licence	1974-75	1975-76	1976-77	
			Amount	Per cent
	\$'000	\$'000	\$'000	
Pay-roll tax	27 048	31 014	35 217	40.0
Motor taxes (a)	11 093	14 884	19 001	21.6
Stamp duties (b)	7 515	10 743	13 787	15.7
Deceased persons' estates duties	4 123	5 461	6 536	7.4
Land tax	3 673	4 349	3 773	4.3
Liquor tax and licences	1 907	2 782	3 443	3.9
Racing taxes	1 477	1 644	2 329	2.6
Casino tax and licence fees	1 820	1 674	1 989	2.3
Hydro-Electric Commission statutory levy	1 430	1 712	1 604	1.8
Soccer Football Pools tax	—	108	254	0.3
Entertainment tax	241	246	93	0.1
Other licences	64	73	19	—
Tobacco tax and licence fees	66	1	—	—
Total (c)	60 456	74 691	88 045	100.0

(a) See following section 'Motor Taxes'.

(b) Excludes: (i) stamp duties on bookmakers' tickets (included in 'Racing taxes'); (ii) stamp duty on third party insurance (included in 'Motor taxes'); and (iii) stamp duty on motor vehicle registrations (included in 'Motor taxes').

(c) Excluded are the following amounts received from the Victorian Government under the Victorian Lotteries Agreement: 1974-75, \$301 000; 1975-76, \$331 000; 1976-77, \$1 065 000.

Motor Taxes: In the preceding table motor taxes are shown as \$19 001 000 for the year 1976-77. The next table shows how this figure can be reconciled with motor tax figures published by the State Treasurer:

Motor Taxes (a) Paid to Consolidated Revenue Fund, 1976-77
(\$'000)

Item	Amount
Motor taxes (a)	19 001
Less Stamp duty on—Vehicle registration (b)	3 407
Third party insurance (b)	440
Traffic fees (c) paid to—Police Department	1 748
Consolidated Revenue Fund	2 376
'Motor tax' as published by State Treasurer	11 030

(a) See preceding table 'State Taxation Collections Paid into Consolidated Revenue'.

(b) Treated as 'stamp duties' tax items by the State Treasurer.

(c) Includes motor vehicle registration fees, drivers' licences, charges for number plates, transfer of ownership fees and learners' permits.

Not all State taxation is paid into the Consolidated Revenue Fund, as shown in the following table:

State Taxation Collections Paid to Special Funds
(\$'000)

Particulars	1974-75	1975-76	1976-77
Motor taxation—			
Retained by Transport Commission	95	104	101
Paid to the State Highways Trust Fund	—	156	210
Racing taxation—			
Paid to racing clubs and Racing Commission	724	1 007	1 022
Insurance companies—			
Contributions to fire authorities	2 123	2 473	2 975
Total	2 943	3 740	4 308

The following table summarises total State taxation collections:

Total State Taxation Collections (a)
(\$'000)

Particulars	1974-75	1975-76	1976-77
Paid into—Consolidated Revenue	60 456	74 691	88 045
Special Funds	2 943	3 740	4 308
Adjustment (b)	+61	+133	+23
Total	63 461	78 564	92 376

(a) Taxation is described more fully in a subsequent section, 'Taxation in Tasmania'.

(b) An adjustment item is necessary to reconcile items referring to different accounting periods.

Debt Charge Recoveries

After Federal Government grants and State taxation, debt charge recoveries is the next largest receipt item in Consolidated Revenue. The next table shows details of the interest and sinking fund payments made by various authorities on advances which have been made to them by the State Government. These advances have been made primarily from State loan borrowings and the Government attempts to recover amounts roughly equal to its liability for debt charges.

Debt Charge Recoveries: Consolidated Revenue Fund
(\$'000)

Source of recovery	Interest			Sinking fund contributions		
	1974-75	1975-76	1976-77	1974-75	1975-76	1976-77
Agricultural Bank—						
Housing	302	295	291	—	—	—
State Advances Act	299	343	437	—	—	—
Closer settlement	106	127	148	—	—	—
Returned soldier settlement	14	14	15	—	—	—
Other	10	9	60	—	—	—
Artificial Breeding Board	22	25	39	2	3	2
Forestry Department	654	828	1 016	—	—	—
Government Printing Office	10	16	17	3	3	3
Housing Department	1 448	1 430	1 508	200	234	247
Hydro-Electric Commission	23 348	27 151	32 019	2 998	3 784	3 993
King Island Abattoirs Board	26	32	36	4	5	5
Loans to industry—						
Aluminium industry agreement	158	158	98	—	—	—
Iron ore (Savage River agreement)	184	175	165	—	—	—
Other	446	414	625	—	—	—

Debt Charge Recoveries: Consolidated Revenue Fund—continued
(\$'000)

Source of recovery	Interest			Sinking fund contributions		
	1974-75	1975-76	1976-77	1974-75	1975-76	1976-77
Metropolitan Transport Trust	160	206	326	21	30	42
Metropolitan Water Board	932	1 033	1 167	126	160	161
Rivers and Water Supply Commission	286	343	391	35	46	47
Tasmanian Grain Elevators Board	66	98	115	10	15	17
Tourism development	167	187	273	—	—	—
Transport Commission	3 227	553	612	319	528	59
Other	585	397	2 857	—	—	—
Total	32 452	33 835	42 215	3 717	4 807	4 576

Consolidated Revenue Fund—Expenditure

In the following table a summary is given of the principal items of Consolidated Revenue Fund expenditure classified according to purpose:

Consolidated Revenue Fund: Expenditure by Purpose (a)
(\$'000)

Purpose	1974-75	1975-76	1976-77
General administration <i>n.e.c.</i>	28 115	32 802	38 698
Law, order and public safety—			
Law courts and legal services	3 996	4 603	5 764
Correctional and custodial services	2 609	2 960	3 501
Police services	13 858	16 146	19 084
Fire protection	1 207	1 571	2 005
Road safety	194	262	350
Other	141	197	400
Total	22 005	25 739	31 104
Education—			
General administration, regulation and research	3 479	4 681	6 526
Student transport	3 347	3 930	4 394
Primary and secondary	53 238	67 351	79 029
Technical	4 841	6 128	7 596
University	13	18	19
Other higher education	3 460	4 753	5 651
Special schools	1 828	1 682	2 069
Other	1 371	680	55
Total	71 576	89 223	105 339
Health—			
General administration, regulation and research	1 237	1 452	1 727
Mental health	7 172	8 353	9 682
Other hospital and clinical services	37 378	45 380	59 943
Preventive services	504	554	564
Maternal and infant health	738	859	975
Other health services	2 673	3 478	5 093
Ambulance services	594	713	1 136
Total	50 298	60 789	79 120
Social security and welfare—			
General administration, regulation and research	646	693	1 007
Aged persons	276	286	396
Unemployed and sick persons and unemployment relief	1 155	763	4 341
Family and child care and assistance	1 724	2 071	2 379
Other	1 173	1 455	1 940
Total	4 974	5 268	10 063
Housing	1 061	2 351	3 573

Consolidated Revenue Fund: Expenditure by Purpose (a)—continued
(\$'000)

Purpose	1974-75	1975-76	1976-77
Protection of the environment	413	507	493
Recreation and related cultural services—			
Cultural facilities	3 809	4 577	5 764
Support for creative and performing arts	25	25	25
Recreational facilities	1 298	1 637	2 230
Other	868	1 032	1 256
Total	6 000	7 270	9 276
Economic services—			
General administration, regulation and research	1 492	1 754	2 102
Soil and water resources management	4 923	5 728	7 348
Forest resources management	3 259	3 865	4 207
Other services to agricultural and pastoral industries	9 370	9 193	10 577
Mining and services to mining	1 671	1 951	2 214
Manufacturing and services to manufacturing	378	487	914
Electricity supply services	47	122	133
Water supply services	1 583	1 724	1 922
Transport and communication—			
Roads and ancillary services	7 411	9 269	11 917
Sea transport	233	212	210
Urban bus services	3 957	5 156	6 030
Other (c)	12 183	3 308	4 589
Other	3 786	4 278	4 879
Total	50 295	47 046	57 042
Other (including debt charges)	47 328	46 622	60 325
Total	282 065	(b) 317 617	395 033
Percentage increase	34.3	12.6	24.4

- (a) Based on Australian purpose classification developed for analysis of government sector accounts; not strictly comparable with functional classifications published in Year Books prior to the 1975 edition.
- (b) Remissions of casino tax of \$329 000 have been excluded from this table and applied to reduce taxation receipts into C.R.F. (For further explanation, see the section 'Casino Tax and Licence Fees' later in this chapter.)
- (c) Including the loss incurred in operating the railways for 1974-75. Tasmania's railways were taken over by the Federal Government from 1 July 1975.

Public Debt Charges

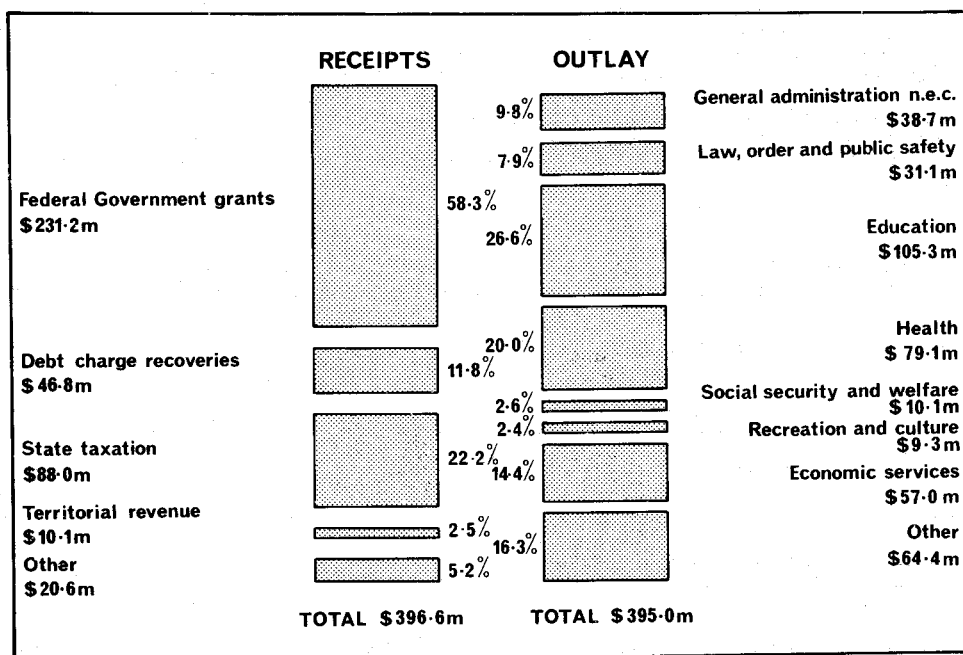
A significant item of expenditure is public debt charges, but a high proportion is recovered from semi-government authorities. The next table shows the net burden on Consolidated Revenue Fund of debt charges:

Public Debt Charges: Net Burden on Consolidated Revenue
(\$'000)

Particulars	Interest			Sinking fund contribution		
	1974-75	1975-76	1976-77	1974-75	1975-76	1976-77
Expenditure from Consolidated Revenue	(a) 47 245	(a) 47 041	(a) 56 211	(b) 6 818	(b) 7 004	(b) 6 869
Recovered from semi-government bodies, etc.	32 452	33 835	42 215	3 717	4 807	4 576
Net burden on Consolidated Revenue (c)	14 793	13 206	13 996	3 100	2 197	2 293

- (a) Includes loan management charges.
- (b) Contribution payable under the financial Agreement to the National Debt Sinking Fund.
- (c) In respect of non-revenue producing assets such as schools, roads, etc.

Consolidated Revenue Fund, 1976-77

*Government Transport Services*

Unlike the Consolidated Revenue Funds of some Australian states, the Tasmanian Fund excludes the gross receipts and expenditure of State business undertakings such as shipping and bus services. The principal charge in 1976-77 under this item was in respect of the net loss incurred by the Transport Commission during 1975-76 (\$4 537 478). Another major item was a contribution of \$6 030 000 to the Metropolitan Transport Trust which experienced a net trading loss of \$6 082 880 in 1976-77.

Roads and Bridges

The chief expenditure under this item in 1976-77 was a transfer of \$11 030 083 to the State Highways Trust Fund, representing revenue received from motor tax and public vehicles fees. Grants totalling \$2 620 000 were paid from Consolidated Revenue Fund to the Transport Commission to cover the cost of vehicle registration and traffic control.

State Trust and Special Funds

State revenues are payable to Consolidated Revenue with the exception of certain revenues which have been set aside by Acts of Parliament for specific purposes and which are payable into special funds or accounts at the State Treasury. The volume of these transactions is high, \$351 929 907 being received in 1976-77, \$351 730 919 being expended and the balance in the funds changing from \$21 279 855 (1 July 1976) to \$21 478 843 (30 June 1977).

It should be noted that many accounts in the Trust and Special Funds indicate Treasury transactions which merely reiterate those recorded under Consolidated Revenue and Loan Funds; the following examples are given:

State Trust and Special Funds: Selected Accounts, 1976-77
(\$'000)

Account	Receipts	Expenditure
Income Tax Deductions Suspense Account (a)	44 381	44 381
Hydro-Electric Commission London Suspense Account (b)	991	1 032

- (a) Wages and salaries included under Consolidated Revenue and Loan Fund expenditure are shown at gross value; however, the deductions applicable to wage and salary earners on Tasmanian Government pay-rolls are passed, via this account to the Federal Government.
- (b) The Treasury acts as agent for meeting overseas liabilities incurred by the Hydro-Electric Commission; these liabilities, mainly incurred in the acquisition of plant and equipment, are largely accounted for in Loan Fund expenditure.

Some accounts are concerned with government activities financed by the Federal Government, the State acting as trustee or agent in the transactions; examples follow:

State Trust and Special Funds: Selected Federal Accounts, 1976-77
(\$'000)

Account	Receipts	Expenditure
Tasmanian University (Commonwealth Grants) Account (a)	17 117	17 117
Recurrent Grants to Non-Government Schools Account (b)	3 444	3 444
Home Builders No. 3 Account (c)	6 139	6 333

- (a) Treasury passes Federal Government grants to University of Tasmania.
- (b) Treasury passes Federal Government grants to non-government schools.
- (c) Agricultural Bank administered loans to home builders, the source of funds being the Federal Government.

In the case of some accounts, there is provision for crediting the Trust and Special Funds with contributions from Consolidated Revenue, an important example being the State Highways Trust Fund:

State Trust and Special Funds: State Highways Trust Fund, 1976-77
(\$'000)

Item	Receipts	Expenditure
Federal Government contribution	20 716	—
Grants from Consolidated Revenue	11 030	—
Roads, bridges, jetties, ferries and planning	434	32 517
Self-balancing entries	10 626	9 904
Fund entries	42 806	42 421

The Forestry Fund Account records transactions under legislation requiring revenue from forestry to be paid to Consolidated Revenue, and for Consolidated Revenue to expend an equal amount on forestry in the following year:

State Trust and Special Funds: Forestry Fund Account, 1976-77
(\$'000)

Item	Receipts	Expenditure
Grants from Consolidated Revenue (a)	4 159	—
Expenditure on forestry	—	4 635
Reimbursement, Softwood Forestry Agreement	476	—
Self-balancing entries	2 514	2 514
Fund entries	7 149	7 149

- (a) Consolidated Revenue recorded forestry receipts of \$4 159 000 in 1975-76; this sum therefore became the 1976-77 contribution from Consolidated Revenue.

Some of the funds held in trust are not owned by the State Government, e.g. St John's Park Inmates Trust Account. Other funds are held on behalf of semi-government authorities, e.g. the Agricultural Bank.

State Loan Fund

Expenditure from the Loan Fund is devoted to two main purposes: (i) the making of advances to State semi-government authorities; and (ii) the carrying out of the State's own works program. Such funds, whether lent to other authorities for their works programs or spent directly by the State, result in the creation of new capital assets, a large proportion of which are revenue earning and therefore capable of reimbursing the State for the debt charges which it has incurred. (An earlier section on Consolidated Revenue expenditure shows the gross and net expenditure on annual debt charges.) In addition, conversion of existing loans is effected from the Loan Fund, but the amounts involved have been excluded from the next two tables as these transactions only alter the rates, sources or terms of existing public debt. Details of these debt servicing transactions are contained in a later table, 'Net Loan Fund Expenditure—Reconciliation'.

In addition to money from loan raisings, the Loan Fund may record other receipts such as the repayment of advances which had been made from the Fund to some Government authorities and community organisations, and contributions to capital works by the Federal Government.

Receipts into the Loan Fund are shown in the following table:

State Loan Fund: Receipts
(*\$'000*)

Particulars	1974-75	1975-76	1976-77
Loans raised for new capital purposes	54 952	60 743	63 802
Loans raised for redemption and conversion (a) ...	65 105	92 049	64 205
Non specific grants from Federal Government	25 977	30 372	31 901
	146 034	183 164	159 908
Specific grants from Federal Government—			
Education	6 828	6 703	5 545
Health and mental health	1 899	3 049	4 152
Urban public transport	359	2 380	253
Other	1 729	456	74
Total	10 815	12 588	10 024
Payments from State sources (b)—			
Industrial Development Act	623	811	913
Aluminium Industry Act	167	767	162
Transport Act	312	710	1 744
State Advances Act	686	611	718
Homes Act	457	556	630
Tourist accommodation and facilities loans	216	185	205
Other	850	1 298	1 742
Total	3 311	4 938	6 114
Total Loan Fund receipts	160 160	200 690	176 046

(a) For the redemption and conversion of existing loans.

(b) Payments and repayments under provisions of various State Acts.

The following table shows annual gross and net loan expenditure. The net loan expenditure for 1976-77 (\$110.2m) was 35.4 per cent greater than for 1975-76.

Loan Fund: Gross and Net Loan Expenditure
(\$'000)

Year	Loan expenditure		Year	Loan expenditure	
	Gross	Net		Gross	Net
1971-72	73 037	66 268	1974-75	90 182	76 056
1972-73	76 813	67 243	1975-76	98 895	81 369
1973-74	73 947	64 603	1976-77	126 316	110 178

Traditionally, loan expenditure has been recorded on both gross and net bases. The annual net loan expenditure is equal to the disbursement of borrowings during the year for new capital purposes (as distinct from borrowings for the conversion of existing debt), plus capital contributions by the Federal Government as above, augmented or diminished by the net movement in the Loan Fund balance. The following table shows the calculation of net loan expenditure from two viewpoints: (i) as a residue from gross loan expenditure; and (ii) as the algebraic sum of new loan raisings for new capital purposes, the net movement in the Loan Fund balance and discount and capital appreciation expenses.

State Loan Fund: Calculation of Net Loan Expenditure
(\$'000)

Particulars	1974-75	1975-76	1976-77
(i) Gross loan expenditure	90 182	98 895	126 316
Less Repayments	3 311	4 938	6 114
Less Federal Government grants	10 815	12 588	10 024
Net loan expenditure	76 056	81 369	110 178
(ii) Gross borrowings for new capital purposes	54 952	60 743	63 802
Federal Government grant	25 977	30 372	31 901
Movement in Loan Fund balance (a)	-4 995	-9 823	+14 382
Other (b)	122	77	93
Net loan expenditure	76 056	81 369	110 178

(a) Negative sign (-) indicates an increase from opening to closing balance, plus sign (+) indicates a decrease.

(b) Discount on borrowings for conversion and re-financing purposes and capital appreciation items.

The next table shows Loan Fund payments classified according to purpose:

Loan Fund Payments Classified by Purpose (a)
(\$'000)

Purpose	1974-75	1975-76	1976-77
General administration, n.e.c.	4 225	5 434	5 983
Law, order and public safety—			
Law courts and legal services	1 319	565	246
Correctional and custodial services	222	119	622
Police services	2 621	3 987	2 221
Fire protection services	153	109	250
Other	80	55	24
Total	4 396	4 836	3 363
Education—			
General administration, regulation and research	3 922	5 953	9 407
Primary, pre-school and secondary	14 370	18 062	15 182
Technical	188	1 424	4 539
University	—	—	—
Other higher education	—	—	—
Adult education	40	32	162
Special schools	16	320	528
Total	18 536	25 792	29 817

Loan Fund Payments Classified by Purpose (a)—continued
(\$'000)

Purpose	1974-75	1975-76	1976-77
Health—			
Mental health	700	603	730
Other hospital and clinical services	4 371	6 990	10 143
Ambulance services	67	101	201
Total	5 137	7 694	11 074
Social security and welfare—			
Aged persons	466	2 408	1 112
Family and child care and assistance	57	56	36
Total	523	2 464	1 148
Housing and home finance services	—	3 084	6 709
Recreation and related cultural services—			
Cultural facilities	571	362	463
Recreational facilities	606	608	2 053
Total	1 177	969	2 516
Economic services—			
Soil and water resource management	200	200	250
Forest resources management	4 000	6 250	8 863
Services to agricultural, pastoral and fishing industries	1 216	2 352	2 843
Mining and services to mining	100	109	184
Manufacturing and services to manufacturing	864	1 303	3 697
Electricity supply	23 225	29 700	31 000
Water supply services	1 195	683	1 244
Transport and communication—			
Road and ancillary systems	883	1 179	5 697
Rail transport	14 345	1 691	524
Sea transport	—	247	—
Urban transport	1 059	3 730	—
Other	1 699	1 101	1 912
Total	48 786	48 544	56 214
Deficit on Consolidated Revenue Fund	7 282	—	9 400
Sinking fund and redemption (incl. conversions)	65 105	92 049	64 205
Total payments from Loan Fund	155 165	190 868	190 428

(a) Based on Australian purpose classification developed for analysis of government sector accounts; not strictly comparable with functional classification published in Year Books prior to the 1975 edition.

The following table shows how a reconciliation may be obtained between total Loan Fund payments in the previous table and net Loan Fund expenditure.

Net Loan Fund Expenditure: Reconciliation
(\$'000)

Particulars	1974-75	1975-76	1976-77
Total payments from Loan Fund	155 165	190 868	190 428
Less Debt service transactions—			
Conversion (Australia)	39 732	78 096	56 911
Conversion (State Savings Bank Agreement)	960	960	960
Redemption from new cash borrowing	24 412	12 994	6 334
Loan Fund expenditure for new capital purposes	90 060	98 818	126 223
Plus Capital appreciation on special bonds	122	77	93
Plus Discount allowed on borrowings	—	—	—
Gross Loan Fund expenditure	90 182	98 895	126 316
Less Total repayments to Loan Fund	14 127	17 526	16 138
Net Loan Fund expenditure (a)	76 056	81 369	110 178

(a) As specified in the Treasurer's Statement.

The *Public Account Act 1962* has, amongst other things, the following provisions relating to the Loan Fund: (i) the Governor, on Treasury advice, may make transfers between block votes as long as the total authorised amount is not exceeded; (ii) a sum of up to \$400 000 may be spent for purposes not previously authorised; (iii) for purposes previously authorised, an additional sum of up to \$1m may be spent; (iv) in instances of expenditure outside the provisions of a specific Loan Fund Appropriation Act, the ratification of such action must be sought from Parliament before the close of the following financial year. The Act also provides for the unexpended balances of votes at the close of the financial year to lapse.

State Public Debt

Prior to 1 July 1975, the State public debt was calculated on two bases: (i) with overseas debt calculated at 'mint par of exchange' i.e. at the exchange rates prevailing on 1 July 1927; and (ii) with overseas debt calculated at current rates of exchange. 'Mint par debt' was the official debt for the purpose of determining sinking fund contributions payable under the Financial Agreement, 1927. This Agreement was amended at the end of June 1975 and a new formula was applied for determining sinking fund contributions. 'Mint par debt' is no longer used in the calculations.

The following table shows the State Public Debt at current rates of exchange:

State Public Debt at 30 June 1977: At Current Rates of Exchange

Place in which debt repayable	Amount in currency in which raised		\$Aust. at current rates of exchange	
	Currency	Debt ('000)	Conversion rate of \$A (a)	Debt (\$A'000)
Australia	\$A	804 336	-	804 336
London	£ sterling	1 665	£ stg 0.6478	2 570
New York	U.S.\$	3 653	U.S.\$ 1.1150	3 276
Canada	Canadian \$	636	Can. \$ 1.1836	537
Netherlands	Guilders	806	Guilders 2.7626	292
Total				811 012

(a) Exchange rates at 30 June 1977 for \$A1.

The growth of the public debt, expressed at current rates of exchange (as at 30 June for year shown), is shown in the following table:

State Public Debt: Place of Flotation and Interest Payable (\$'000)

At 30 June	Debt redeemable in—						Total debt	Interest payable
	London	New York	Canada	Switzerland	Netherlands	Australia		
1972	6 099	6 743	686	810	417	695 167	709 921	39 202
1973	4 937	4 565	533	895	390	740 672	751 990	41 620
1974	4 142	3 849	507	834	328	777 958	787 618	45 922
1975	3 161	3 799	498	1 117	350	824 936	833 862	49 005
1976	2 551	3 462	546	-	287	746 952	753 797	53 748
1977	2 570	3 276	537	-	292	804 336	811 012	60 437

A notable feature of the State Public Debt is that approximately 99 per cent of indebtedness is now domiciled in Australia. There has been a gradual change from the situation which existed a century ago when nearly all loans were financed in London.

Public Debt Transactions

Securities in the form of bonds, inscribed stock and debentures are issued by the Commonwealth for and on behalf of Tasmania. Under the Financial Agreement of 1927

redemption and conversion of loans is carried out by the National Debt Sinking Fund Commission.

With the amendment, in 1975, to the Agreement of 1927, a new base for the provision of Sinking Funds by the states was established. The agreement, which is to continue until 1985, provided for a base payment by Tasmania of \$7m per annum. For the period until 1985 Tasmania's contribution to the Sinking Fund is to be increased or reduced by 1.2 per cent per annum of the amount by which the public debt thereafter is increased or diminished.

The following table shows particulars of loans raised and redeemed annually during the most recent four-year period expressed at current rates of exchange. It will be observed that redemption of loans falling due in any particular year is achieved, in the main, by conversion (i.e. by renewal of the original loans on new terms and conditions).

State Public Debt: Conversation and Redemption at Current Rates of Exchange
(\$'000)

Particulars	1973-74	1974-75	1975-76	1976-77
Loans raised for—				
New capital purposes	43 490	54 952	60 743	63 807
Conversion purposes	39 494	40 692	79 056	57 871
Redemption of maturing loans	39 857	24 412	12 994	6 334
Total raisings	122 841	120 057	152 792	128 012
Less Loans redeemed—				
By conversion	39 494	40 692	79 056	57 871
From new cash raisings	39 613	24 290	12 917	6 241
From National Debt Sinking Fund (a)	8 106	8 831	9 284	6 685
Debt transferred to Commonwealth	—	—	(b) 131 600	—
Net increase in public debt	35 628	46 244	—80 065	57 215
Debt at end of year	787 618	833 862	753 797	811 012

(a) Includes a balancing item due to fluctuation in exchange rates during the year, the actual redemption being \$7 105 000 in 1973-74, \$9 674 000 in 1974-75, \$9 177 000 in 1975-76, and \$7 213 000 in 1976-77.

(b) (i) State debt of \$69 100 000 taken over by the Federal Government following amendment to the Financial Agreement of 1927.

(ii) Debt of \$62 500 000 related to railway operations transferred to the Federal Government under the Railways Transfer Agreement of 1975.

The next table summarises the transactions of the National Debt Commission in relation to the Tasmanian Public Debt:

National Debt Commission Transactions in Respect of Tasmanian Public Debt
(\$'000)

Particulars	1973-74	1974-75	1975-76	1976-77
Balance at beginning of period	671	1 974	1 268	1 208
Contributions—				
From—Federal Government	2 044	2 141	2 100	2 069
State Government	6 339	6 805	7 000	6 869
Interest received (net)	26	21	17	19
Funds available	9 080	10 941	10 385	10 165
Less Redemption and re-purchase at current rates of exchange	7 105	9 674	9 177	7 213
Balance at end of period	1 974	1 268	1 208	2 952

The National debt Commission was established as part of the 1927 Financial Agreement and its function is to administer a single consolidated sinking fund in respect of the debt of the

Federal and state governments. (The obligations of the states and the Federal Government in contributing to the consolidated sinking fund are set out earlier in this chapter in a section headed 'Payments Under the Financial Agreement (1927)').

TAXATION

Taxation in Tasmania

As Australian citizens, Tasmanians are subject to taxes levied both by the State and the Federal Government. The next table shows taxes (total amounts and per capita figures) collected by the State Government and semi-government authorities in Tasmania and Federal Government collections for Australia:

Taxation: State of Tasmania and Federal Government, 1976-77 (a)

Tax	Amount (\$'000)		Per head of population (\$)	
	Tasmania (b)	Federal Government (c)	Tasmania	Federal Government
Income (personal and company)	-	13 967 189	-	998.24
Customs and excise	-	3 637 436	-	259.97
Sales	-	1 650 257	-	117.94
Pay-roll	35 217	18 798	86.08	1.34
Probate and succession duties	6 536	76 189	15.98	5.45
Motor	19 312	-	47.21	-
Stamp duties	13 787	-	33.70	-
Land	3 773	-	9.22	-
Racing	3 374	-	8.25	-
Liquor	3 443	-	8.42	-
H.E.C. statutory levy	1 604	-	3.92	-
Levy on insurance companies for fire authorities	2 975	-	7.27	-
Entertainment	93	-	0.23	-
Casino tax and licence fees	1 989	-	4.86	-
Soccer football pools tax	254	-	0.62	-
Coal export duty	-	121 329	-	8.67
Primary production tax	-	159 006	-	11.36
All other	19	165 788	0.05	11.85
Total	92 376	19 795 992	225.80	1 414.83

(a) Collections from all sources, including amounts paid to special funds.

(b) State taxes collected by Tasmanian Government and other state authorities.

(c) Federal Government taxes collected for Australia as a whole.

In addition to the taxes shown in the above table Tasmanian property owners also pay rates and licence fees to local government authorities. Total rates and licence fees collected during 1976-77 amounted to \$47.2m or \$115.38 per head of mean population.

Assuming that Tasmanians contributed to Federal Government taxation in strict proportion to the relative mean populations of the State and Australia, it would be theoretically correct to add the three per capita figures (\$225.80, \$1 414.83 and \$115.38) and arrive at a figure of \$1 756.01 as the *total per capita taxation* of all levels of government on residents within the State. However there are inaccuracies involved in this method. For a number of federal taxes (e.g. payroll tax and rates on land paid to the Federal Government by residents of the A.C.T., and coal export duty) Tasmanians pay minimal or no tax. An alternative way of examining the problem is to refer to total Federal Government taxes collected in Tasmania but this measure is unsatisfactory for a number of reasons, the chief defects being:

- (i) Central office collections of Federal Government taxation ceased at 30 June 1970 and for the income years after 1969-70 all assessments have been handled in state offices of the Taxation Department. The effects of this change

are deceptive because income tax collected in Tasmania does not necessarily directly relate to income earned in Tasmania (e.g. a company with branches in Tasmania but with its head-office in Melbourne would normally submit its tax return to the Victorian Taxation Office). (The 1976 *Year Book* includes a special article on the location of control of Tasmanian business establishments—pp. 404-406.)

- (ii) Goods shipped to Tasmania will, in some cases, already have been taxed in another state in respect of customs or sales taxes. Even though other states are credited with the collection of these taxes, the fact remains that Tasmanians bear their incidence in the form of increased commodity prices. The amount of tax collected in other Australian states on goods shipped to Tasmania is not known.

Estimated Incidence

In assessing the collection in other Australian states of two taxes affecting Tasmanians, account is taken of selected sales figures derived from the latest Retail Census (for 1973-74) which showed Tasmanian *per head* sales to be 93.2 per cent of the corresponding Australian figure. Accordingly the *per head* incidence of customs and sales taxes in Tasmania is taken to be 93.2 per cent of the Australian *per head* collection figure for each tax. Estimates are compiled using these *per head* figures and the State's mean population.

The following table shows actual collections of the Federal Government taxes in the State and also the estimated incidence of taxes (other than income tax and estate duty) collected elsewhere in Australia:

**Taxation Collected by the Federal Government in Tasmania and Elsewhere,
and Estimated Incidence in Tasmania
(\$'000)**

Tax	1974-75	1975-76	1976-77
Collected in Tasmania—			
Income tax (a)	218 390	263 264	308 595
Estate duty (a)	1 300	1 757	1 176
Gift duty	192	233	771
Stevedoring industry charge	1 306	1 980	1 739
Broadcast listeners' and television viewers' licences	556	—	—
Primary production taxes	2 217	2 752	3 360
Sales tax	19 176	23 052	27 730
Customs	6 400	6 308	8 310
Excise	47 852	57 832	60 082
Other	246	265	398
Total collected in Tasmania	297 635	357 443	412 161
Collected elsewhere in Australia (b)—			
Sales tax	13 121	15 463	17 241
Customs	17 118	19 183	23 082
Estimated incidence (c)	327 874	392 089	452 484

(a) Tax collected in Tasmania may not directly relate to income earned and assets in Tasmania since a multi-state return can be lodged in any one state office.

(b) Estimated; goods on which these taxes were paid are assumed to have been sold in Tasmania.

(c) Excludes company income tax collected in other states in respect of establishments operating in Tasmania.

Federal Government Income Tax

Income tax, the most important revenue raising levy in Australia, was introduced in 1884 by the colony of South Australia. In the course of time this form of taxation was adopted by all the state governments and the Federal Government between 1884 and 1915. From 1915 to 1942 the state and Federal Governments imposed income taxation concurrently, the rate of state income tax varying from state to state. Uniform taxation on incomes throughout Australia was adopted in 1942, as a war measure, when the Federal Government became the

sole authority levying this tax. However, under a new scheme introduced by the Federal Government in 1977-78, each state was given the right to impose a surcharge or grant a rebate on personal income tax in its state (see 'Personal Income Tax Sharing with the States' earlier in this chapter).

Income Tax Rates

Details relating to the amounts of income tax payable by companies and by individuals are included in Chapter 18.

Personal Income Tax Assessed in Tasmania

The next tables show the number of taxpayers, taxable income and income tax assessed during the year 1976-77 (income year 1975-76) and earlier years. The following definitions apply:

Net Income: Assessable income less deductions for expenditure incurred in earning that income (but before deductions for concessional allowances).

Individuals (Excluding Companies): Includes residents and non-residents assessed in Tasmania.

Taxable Income: Net income less concessional deductions in respect of dependants, life assurance, etc. up to 1974-75; net income less deductions for gifts to approved funds or institutions and for allowable housing loan interest for 1975-76.

The following table dissects the number of taxpayers, income tax assessed, etc. by grade of net income for the income year 1975-76. Average weekly earnings per employed male unit (see Chapter 17) for Tasmania in 1975-76 were \$157.80 (equivalent to an annual salary of \$8 206).

Tasmania, Income Tax: Income Year 1975-76—Individuals (a)

Grade of net income	Number of taxpayers			Cumulative percentage of taxpayers	Net income	Total taxable income	Net income tax assessed
	Males	Females	Persons				
\$					\$'000	\$'000	\$'000
Under 3 000	2 399	4 569	6 968	4.6	18 809	18 658	487
3 000- 3 499	2 765	4 488	7 253	9.3	23 539	23 228	1 316
3 500- 3 999	2 790	4 080	6 870	13.8	25 734	25 359	2 073
4 000- 4 499	3 046	3 925	6 971	18.4	29 598	29 203	2 906
4 500- 4 999	3 261	3 687	6 948	22.9	32 991	32 501	3 683
5 000- 5 499	3 579	3 592	7 171	27.6	37 686	37 109	4 696
5 500- 5 999	4 308	3 577	7 885	32.7	45 355	44 577	6 184
6 000- 6 499	5 313	3 762	9 075	38.7	56 827	55 835	8 375
6 500- 6 999	6 360	3 720	10 080	45.3	68 021	66 686	10 567
7 000- 7 499	7 043	2 902	9 945	51.8	72 067	70 563	11 589
7 500- 7 999	7 587	2 114	9 701	58.1	75 140	73 484	12 476
8 000- 8 499	7 389	1 763	9 152	64.1	75 488	73 743	12 961
8 500- 8 999	6 750	1 606	8 356	69.6	73 048	71 380	13 094
9 000- 9 499	5 950	1 123	7 073	74.2	65 389	63 866	12 027
9 500- 9 999	5 089	861	5 950	78.1	57 985	56 654	11 007
10 000-10 999	7 922	1 266	9 188	84.1	96 183	94 137	19 302
11 000-11 999	5 598	914	6 512	88.3	74 665	73 323	16 344
12 000-12 999	3 960	479	4 439	91.2	55 376	54 425	12 943
13 000-13 999	2 681	380	3 061	93.2	41 198	40 496	10 219
14 000-14 999	2 195	283	2 478	94.9	35 878	35 308	9 333
15 000-19 999	4 393	586	4 979	98.1	84 438	82 896	24 818
20 000-24 999	1 240	188	1 428	99.1	31 483	30 732	11 139
25 000-29 999	524	81	605	99.5	16 484	16 014	6 586
30 000-49 999	590	72	662	99.9	24 379	23 805	11 282
50 000 and over	149	26	175	100.00	12 452	12 337	6 902
Total	102 881	50 044	152 925	...	1 230 210	1 206 315	242 312

(a) For definitions, see text above.

Tasmania, Income Tax: Individuals (a)

Income year	Number of taxpayers			Net income	Taxable income (c)	Net income tax assessed		
	Males	Females	Persons			Total	Per taxpayer	
							Amount	Increase (b)
				\$'000	\$'000	\$'000	\$	per cent
1970-71	107 078	52 174	159 252	550 670	446 520	72 323	454	6.8
1971-72	108 171	54 860	163 031	615 567	500 856	88 239	541	19.2
1972-73	99 830	44 984	144 814	660 913	539 410	92 335	638	17.8
1973-74	103 903	50 815	154 718	817 976	688 577	134 109	867	35.9
1974-75	105 639	56 602	162 241	1 064 186	917 430	180 392	1 112	28.3
1975-76	102 881	50 044	152 925	1 230 210	1 206 315	242 312	1 585	42.5

(a) For definitions, see text above.

(b) Increase on previous year.

(c) Up to 1974-75, net income less concessional deductions in respect of dependants, etc. From 1975-76, such concessional deductions in respect of dependants, rates, life assurance, etc. were replaced by tax rebates which are deducted from gross tax payable to arrive at net tax assessed.

State Taxation

In the section on the Consolidated Revenue Fund, taxes collected by the Tasmanian Government are shown in summarised form.

The next table gives full details of State taxation. It should be noted that certain taxes are reserved for special purposes. Examples are: (i) motor taxation—the 'motor tax' and 'public vehicle fees' components of this item (\$11 030 000 in 1976-77) are passed from Consolidated Revenue to the State Highways Trust Fund; and (ii) racing and gaming taxes—all racing and gaming taxes paid to special funds are passed to the racing clubs.

State Taxation Collections (a)
(\$'000)

Tax	1974-75	1975-76	1976-77
Deceased persons' estates duties	4 123	5 461	6 536
Entertainment tax	241	246	93
Stamp duties (excluding bookmakers' tickets)—			
Cheques	976	1 153	1 178
Bills of exchange and lading	1	1	6
Hire purchase and related agreements	1 044	1 381	2 110
Legal documents, etc.	3 170	5 044	6 270
Adhesive revenue stamps	376	411	466
Insurances	1 828	2 623	3 600
Marketable securities	120	129	157
Land tax	3 673	4 349	3 773
Motor taxation—			
Paid to—Consolidated Revenue	11 093	14 884	19 001
Special funds	95	260	311
Tax paid to fire authorities (b)	2 123	2 473	2 975
Liquor tax and related licences (c)	1 907	2 782	3 443
Racing and gaming taxes—			
Paid to—Consolidated Revenue	1 477	1 644	2 329
Adjustment (d)	+61	+133	+23
Special funds	724	1 007	1 022
Pay-roll tax	27 048	31 014	35 217
Hydro-Electric Commission statutory levy	1 430	1 712	1 604
Casino tax and licence fees	1 820	1 674	1 989
Soccer football pools tax	—	108	254
Tobacco tax and licence fees	66	1	—
Sundry licences—			
Auctioneers and estate agents	6	8	7
Environment Protection Act	51	56	—
Other (including Firearms Act)	7	10	12
Total	63 461	78 564	92 376
Percentage increase	26.8	23.8	17.6

(a) Collections from all sources of taxation, including amounts paid to special funds.

(b) Paid by insurance companies direct to the Fire Brigades Commission and the Rural Fires Board.

(c) See later section 'Fees and Licences' under the Licensing Act for details.

(d) For different accounting periods.

State Land Tax

Rates of tax were changed by the *Land Tax Act 1976*. The main provisions of the Act were: (i) land tax on rural land was abolished from 1976-77 onwards; (ii) land tax was to be levied on land values, not unimproved values; (iii) exemption of tax in respect of urban land valued at \$4 699 or less, compared with the previous exemption up to \$1 999; and (iv) land valued at between \$4 700 and \$10 000 attracted less tax than previously.

The rates of land tax assessed on urban land values for the year 1976-77 are shown in the following table:

State Land Tax: Urban Land 1976-77

Taxable land value bracket	Marginal tax rate (a)	Tax payable	
		On land value in bracket specified in first column	On higher figure in first column
\$	cents per \$	\$	\$
Up to 4 500	—	—	—
4 501- 15 000 (b)	1.0	105	105
15 001- 25 000	1.2	120	225
25 001- 50 000	1.4	350	575
50 001-100 000	2.0	1 000	1 575
100 001-150 000	2.5	1 250	2 825
Over 150 000	3.0	—	—

(a) Tax payable in respect of each dollar in the range specified.

(b) No tax is payable where the land value is \$4 699 or less.

The *Land Tax Act 1977* maintained the provisions of the 1976 Act for 1977-78 together with provision for a home owner's rebate. For 1977-78, home owners could claim a rebate of land tax if the land value of urban land owned was less than \$25 000. The amount of the rebate was as follows:

- where the land value of the relevant land was not more than \$15 000, the full amount of land tax otherwise payable; and
- where the land value of the relevant land was from \$15 001 to \$24 999, \$105 less \$10.50 for each full \$1 000 by which the land value exceeded \$15 000.

State Land Tax: Value of Taxable Properties and Tax Assessed (\$'000)

Year	Gross unimproved value				Gross land value of urban land	Tax assessed			
	Urban	Rural	Composite (a)	Total		Urban	Rural	Composite (a)	Total
1971-72	274 210	30 349	26 698	331 257	n.a.	2 319	224	309	2 852
1972-73	296 176	(b)21 011	(b)26 392	343 579	n.a.	2 494	(b) 178	(b) 283	2 954
1973-74	310 740	20 860	29 724	361 324	n.a.	2 522	177	335	3 035
1974-75	359 069	25 113	32 123	416 304	n.a.	3 167	221	416	3 803
1975-76	414 793	29 109	33 305	477 207	n.a.	3 776	256	393	4 425
1976-77 (c) .....	..	..	..	..	334 866	—	—	—	3 800

(a) Properties made up of both urban and rural land.

(b) Decrease due to an increase in the exemption level on rural land from \$10 000 to \$20 000.

(c) From 1976-77 onwards land tax on rural land was abolished. Land tax is now levied on land value not unimproved value.

State Deceased Persons' Estate Duties

The legislation dealing with State deceased persons' estate duties is contained in the *Deceased Persons' Estates Duties Act 1931* (as amended). The following table gives details of assessments for 1976-77:

State Deceased Persons' Estate Duties
Number of Estates, Net Value and Tax Assessed, 1976-77

Grade of dutiable value	Estates		Net value as assessed	Total duty assessed (a)	Average duty per taxable estate
	Examined	Taxable			
	no.	no.	\$'000	\$'000	\$
1- 500	98	12	12	—	33.9
501- 1 000	46	7	35	1	153.6
1 001- 1 500	37	8	42	—	61.4
1 501- 2 000	45	11	78	1	134.4
2 001- 3 000	84	25	206	4	178.6
3 001- 4 000	54	16	218	4	266.9
4 001- 5 000	84	38	371	6	145.1
5 001- 6 000	64	43	350	8	190.9
6 001- 8 000	122	70	845	25	352.0
8 001- 10 000	113	68	984	27	402.5
10 001- 15 000	225	147	2 753	117	796.4
15 001- 20 000	209	195	3 605	224	1 147.6
20 001- 30 000	335	253	8 147	575	2 273.6
30 001- 40 000	185	158	6 115	491	3 109.6
40 001- 50 000	105	96	4 360	442	4 602.4
50 001-100 000	216	204	12 273	1 580	7 742.9
100 001-150 000	49	48	5 555	1 056	22 009.8
150 001 and over	56	56	8 250	2 094	37 391.5
Adjustments .....	..	..	—	526	..
Total	2 127	1 455	54 199	6 131	..

(a) Rates of duty and levels of exemption vary according to the class of beneficiary and the type of asset contained in the estate (details may be obtained from the Public Trustee).

Motor Taxation

The chief components of motor taxation are: (i) motor tax assessed on a power-weight formula; (ii) vehicle registration fees; (iii) drivers' and riders' licences; and (iv) other registration fees mainly related to public vehicles.

Details of motor taxation collections are shown in the following table:

State Motor Taxation
(\$'000)

Particulars	1974-75	1975-76	1976-77
Motor tax	6 312	8 045	10 251
Public vehicle fees (a)	443	605	880
Stamp duty on—Third party insurance	391	428	440
Vehicle registration	1 718	2 706	3 407
Other traffic fees (b)	2 324	3 205	4 124
Total	11 188	14 988	19 102
Paid into Consolidated Revenue Fund	11 093	14 884	19 001
Retained by Transport Commission	95	104	101

(a) Includes public vehicle fees retained by Transport Commission.

(b) Includes registration fees, licences, number plate charges, transfer fees and learners' permits.

'Motor tax' plus most of the item 'public vehicle fees' shown in the above table are paid to the State Highways Trust Fund. (The amount paid over in 1976-77 was \$11 030 000.)

Racing Taxation

Amendments to the *Racing and Gaming Act* in 1974 established the Totalisator Agency Board from January 1975, operating both on and off course totalisator betting, and restricted

the operations of licensed bookmakers to on-course betting only. (For further details on the rates of taxation on racing, see the 1977 Year Book.)

Details of racing taxation collections and distribution for recent years are shown in the next table:

State Racing Taxation: Collection and Distribution
(\$'000)

Particulars	1974-75	1975-76	1976-77
RACING TAXATION RECEIPTS			
Totalisator tax (a)	489	1 641	2 069
Bookmakers' commission and licences	1 597	1 078	1 234
Stamp duty on bookmakers' tickets	176	65	71
Total	2 262	2 785	3 374
DISTRIBUTION OF RACING TAXATION RECEIPTS			
Paid into Consolidated Revenue Fund	1 477	1 644	2 329
Adjustment (b)	+61	+133	-23
Commission payable to racing clubs	724	1 007	1 022
Total	2 262	2 785	3 374

(a) Includes amounts received by the Racing and Gaming Commission for payment to Consolidated Revenue. Excludes amounts retained by the Totalisator Agency Board.

(b) An adjustment item is necessary to reconcile items referring to different accounting periods.

The turnover on which taxes were levied are as follows:

Betting: Bookmakers' and Totalisator Turnover
(\$'000)

Turnover	1974-75	1975-76	1976-77
Licensed bookmakers	63 032	42 059	47 651
Totalisator	(a) 11 378	28 974	35 347
Total betting turnover	74 410	71 034	82 998

(a) Year ended 31 July.

State Taxation on Lotteries

From 1942 (when the Federal Government became the sole collector of income tax), lotteries conducted from Hobart by Tattersalls (George Adams Estate) were Tasmania's chief source of revenue through State taxation. On 14 July 1954, the promoters transferred their operations to Victoria. A new organisation—Tasmanian Lotteries—was granted a licence and operated until 30 September 1961, when the proprietor surrendered the licence. No operator is now licensed.

In September 1960, the *Racing and Gaming Act 1952* was amended to permit agreements with other states for the sale of their lottery tickets in Tasmania. Under an agreement with the Victorian Government, Tattersalls was allowed to sell tickets through accredited Tasmanian representatives; the Victorian Government was to pay quarterly to the Tasmanian Government 15½ per cent of the value of subscriptions made as a result of this concession. For the purpose of public finance statistics, these amounts are classified not as 'taxation' but as 'payments from other states'.

The following table shows the payments made under the interstate agreement since 1969-70:

Payments to Tasmanian Government Based on Sale of Tattersalls Lottery Tickets
(\$)

Year	Amount	Year	Amount
1971-72	179 343	1974-75	300 810
1972-73	200 059	1975-76	330 660
1973-74	227 770	1976-77	(a) 1 065 487

(a) Includes \$135 533 due for the year 1975-76 but not received until July 1976.

Fees and Licences under the Licensing Act

The State raises revenue from hotels, clubs, restaurants and liquor wholesalers by: (i) licensing; and (ii) imposing 'percentage fees' based on turnover for the year *preceding* collection.

Fees and Related Licences Collected Under the Licensing Act
(**\$'000**)

Tax or Licence	1974-75	1975-76	1976-77
Percentage fees (a)	1 637	2 360	2 825
Publicans' and other licences under the Licensing Act	41	37	30
Wholesale licences	221	379	580
Registration of clubs	8	7	8
Total	1 907	2 782	3 443

(a) Based on liquor purchases by hotels and direct sales by wholesalers to the public.

Casino Tax and Licence Fees

The rate of casino tax and the licence fee were established by an agreement made in September 1968 between the State Treasurer, Federal Hotels Ltd and Australian National Hotels Ltd. The agreement was ratified by the *Wrest Point Casino Licence and Development Act 1968*. The casino tax is calculated according to a graduated scale based upon monthly gross profit and is payable monthly. Initially rates ranged from five per cent of gross profit where that profit was less than \$25 000 for the month to 30 per cent where the gross profit exceeded \$125 000. The licence fee was fixed at \$2 500 per month.

Early in 1975 the State Government received a submission from Australian National Hotels Ltd for changes in the tax scale. As a result, the effective maximum rate of tax was reduced to 25 per cent. This reduction was effected, from 1 June 1975 to 30 November 1976, by the remission of one sixth of the tax paid through an appropriation from Consolidated Revenue. An amendment to the Act passed in November 1976 reduced the actual maximum rate of tax to 25 per cent. In this Chapter, taxation receipts have been recorded *net* of the remission of casino tax and, consequently, total receipts and expenditure for Consolidated Revenue are slightly less than the totals recorded by the State Treasurer.

Details of casino taxation collections are shown in the following table:

Casino Tax and Licence Fees
(**\$'000**)

Particulars	1974-75	1975-76	1976-77
Casino tax	1 790	(a) 1 646	1 959
Licence fee	30	28	30
Total	1 820	1 674	1 989

(a) Total tax paid \$1 975 000; amount of remission \$329 000.

Tobacco Tax and Licence Fees

Tobacco licence fees were suspended from 1 July 1974 by force of the Tobacco (Suspension) Regulations 1974. Tobacco tax was not required to be collected from 1 April 1974. Receipts amounting to \$1 155 collected in 1975-76 related to arrears due for 1974-75.

Further References

ABS Publications Produced by the Canberra Office

Public Authority Finance: State and Local Authorities (5504.0) (annual, 1975-76 issue released 27-1-78).

Public Authority Finance: Taxation (5506.0) (annual, 1976-77 released 1-6-78).

Other Publications

Report of the Auditor-General and the Statement of Public Accounts (published annually by the Tasmanian Government Printer, Hobart).

Chapter 6

DEMOGRAPHY

POPULATION

Introduction

Census of 30 June 1976

For tables showing the main characteristics of the Tasmanian population, see a later section 'Census 1976: Characteristics of the Population'. The section includes a brief summary of the processing of the 1976 Census.

Post-Enumeration Surveys

Post-enumeration surveys designed to measure the degree of error were conducted after both the 1976 and 1971 censuses. Net under-enumeration was derived by comparing results from the Census and the post-enumeration survey for the same individuals, and identifying omissions and duplications in the Census.

Tasmania's under-enumeration was found to be 1.116 per cent in the 1976 Census (2.709 per cent for Australia) which was a significant increase in the level of under-enumeration nationally compared with the 1971 Census. Therefore, it was decided to adjust the 1976 population count for each state and territory. The local government area, statistical division and sub-division and urban centre figures have also been adjusted, though figures for bounded localities and collection districts have not been adjusted.

Source of Population Figures

There are two principal methods by which population figures are obtained: (i) by census count; and (ii) intercensal estimates based on the application of vital and migration statistics to census based data. The second method involves taking account of *natural increase* (excess of births over deaths), and *net migration* (excess of arrivals over departures) and applying these net figures to information obtained from an earlier census, the result being termed an intercensal estimate. After each census, the estimates for the newly-completed intercensal period are revised to adjust for the difference between the new census result and the comparable estimate.

Censuses were conducted by the State in 1841, 1847, 1851, 1857, 1861, 1870, 1881, 1891 and 1901; the Australian Statistician became responsible for censuses with the establishment of the Commonwealth Bureau of Census and Statistics (now the Australian Bureau of Statistics) and conducted them in 1911, 1921, 1933, 1947, 1954, 1961, 1966, 1971 and 1976.

Population from 1820

The table that follows is based on the traditional historical series and has been compiled to show the population at the end of each decade from 1820, masculinity, the natural increase and the average annual growth in total population for each decade.

Historical Summary of Tasmanian Population in Decades

Year	Estimated population (a)			Masculinity (b)	Average annual increase for decade (c)	
	Males	Females	Persons		In total population	From natural increase (d)
1820 (e).....	4 057	1 343	5 400	302.08	n.a.	n.a.
1830 (e).....	18 108	6 171	24 279	293.44	1 888	n.a.
1840 (e).....	32 040	13 959	45 999	229.53	2 172	106
1850.....	44 229	24 641	68 870	179.49	2 287	656
1860.....	49 653	40 168	89 821	123.61	2 095	1 214
1870.....	53 517	47 369	100 886	112.98	1 107	1 622
1880.....	60 568	54 222	114 790	111.70	1 390	1 542
1890.....	76 453	68 334	144 787	111.88	3 000	2 496
1900.....	89 763	83 137	172 900	107.97	2 811	2 776
1910.....	97 026	92 781	189 807	104.58	1 691	3 322
1920.....	106 236	103 189	209 425	102.95	1 962	3 649
1930.....	111 148	108 835	219 983	102.13	1 056	3 127
1940.....	121 911	118 280	240 191	103.07	2 021	2 438
1950.....	140 339	135 563	275 902	103.52	3 571	3 768
1960.....	174 379	169 531	343 910	102.86	6 801	5 523
1970.....	195 280	192 440	387 720	101.48	4 381	5 116
1977.....	205 590	205 000	410 590	100.29	(f) 3 267	(f) 4 129

(a) Up to 1900, at 31 December; from 1910, at 30 June.

(b) Number of males per 100 females.

(c) Decade ending in year shown.

(d) Excess of births over deaths in calendar years.

(e) Imperial military establishment of about 1 000 troops included: excluded after 1842.

(f) Average calculated for seven years of present decade.

Comparison With Other States

The following table compares the Tasmanian population at censuses from 1901 with that of other states and territories (full-blood Aboriginals are included from 1966):

Australia: Census Populations of States and Territories (a) (b)
(⁰000 Persons)

State or territory	1901	1933	1947	1954	1961	1966 (b)	1971 (c)	1976 (c)
N.S.W.....	1 355	2 601	2 985	3 424	3 917	4 238	4 679	4 914
Victoria.....	1 201	1 820	2 055	2 452	2 930	3 220	3 520	3 746
Queensland.....	498	947	1 106	1 318	1 519	1 674	1 881	2 112
S.A.....	359	581	646	797	969	1 095	1 185	1 262
W.A.....	184	439	502	640	737	848	1 043	1 170
Tasmania.....	172	228	257	309	350	371	390	407
N.T.....	5	5	11	17	27	57	92	101
A.C.T. (d).....	—	9	17	30	59	96	146	203
Australia.....	3 774	6 630	7 579	8 987	10 508	11 599	12 937	13 915

(a) Censuses of 1911 and 1921 are not shown.

(b) Includes full-blood Aboriginals from 1966.

(c) Adjusted for under-enumeration. Census figures up to 1966 are as recorded.

(d) Part of N.S.W. prior to 1911.

The average annual increase in population for Tasmania from 1971 to 1976 (based on adjusted population) was 0.85 per cent. The corresponding Australian annual rate of population increase was 1.47 per cent.

Arrivals and Departures

Net migration, on a *de facto* basis for any period, is the difference between arrivals and departures, such movements being reported by the shipping companies and airlines. 'Arrivals' in the following table applies to all persons arriving in Tasmania from overseas or from other Australian states; it includes Tasmanians returning home. Similarly, 'departures' applies to all persons leaving Tasmania for overseas or for other Australian states; it includes visitors returning home from Tasmania. The table below shows annual arrivals and departures and also quarterly arrivals and departures for recent years.

Recorded Arrivals and Departures: Tasmania (a)

Year	Arrivals	Departures	Quarter ending	Arrivals	Departures
1969	296 186	297 069	1976—March	148 623	156 019
1970	320 867	323 449	June	121 320	131 939
1971	340 163	340 642	September	105 599	104 829
1972	356 689	355 512	December	129 736	114 678
1973	450 794	448 765	1977—March	151 967	164 341
1974	502 813	502 649	June	116 974	124 167
1975	509 285	514 415	September	122 077	119 865
1976	505 278	507 465	December	141 540	122 211
1977	532 558	530 584			

(a) Arrivals and departures on a *de facto* basis.

It should be noted that the data shown in the preceding table are compiled only on the basis of individual journeys. There is no classification of the arrival or departure figures into 'Tasmanians' and 'others' nor is any information obtained about the type of movement involved—i.e. whether the arrival or departure is of a permanent, long-term or short-term nature. It therefore follows that while increased tourist movements have made a principal contribution to the growth in the arrival and departure figures, as shown in the table, it is not possible to isolate tourist movements from other movements to and from Tasmania.

Population in Local Government Areas

The next table shows the population in local government areas, statistical divisions and sub-divisions for the censuses of 1961, 1966, 1971 and 1976:

Population in Local Governments Areas and Statistical Divisions at 30 June

Local government area (statistical division and sub-division in bold type)		Census (a)			
		1961	1966	1971	1976
Hobart (H)		54 021	53 257	52 410	50 570
Glenorchy (H)		35 682	39 053	42 630	42 600
Clarence (H)		23 140	30 236	37 090	42 360
Brighton (H) (S)		2 115	2 207	2 330	4 970
Kingborough (H) (S)		10 025	10 322	10 810	13 940
New Norfolk (H) (S)		10 217	10 315	10 610	10 240
Sorell (H) (S)		2 878	3 309	3 630	4 350
Bothwell (S)		1 288	1 008	810	840
Bruny (S)		504	400	310	320
Esperance (S)		3 436	3 740	3 510	3 180
Glamorgan (S)		1 128	1 125	1 120	1 330
Green Ponds (S)		969	880	880	870
Hamilton (S)		4 178	4 329	4 060	3 550
Huon (S)		5 460	5 264	4 750	4 870
Oatlands (S)		2 691	2 501	2 130	2 210
Port Cygnet (S)		2 754	2 550	2 070	2 060
Richmond (S)		1 673	1 658	1 580	1 690
Spring Bay (S)		1 155	1 205	1 410	1 770
Tasman (S)		1 108	1 126	1 030	950
HOBART		130 236	141 311	153 140	162 660
SOUTHERN		34 186	33 174	30 030	30 010

Population in Local Government Areas and Statistical Divisions at 30 June—continued

Local government area (statistical division and subdivision in bold type)	Census (a)			
	1961	1966	1971	1976
Launceston	38 118	37 217	35 090	33 080
Beaconsfield	8 550	9 983	10 970	12 550
Deloraine	5 574	5 205	4 810	4 820
Evandale	1 608	1 554	1 460	1 600
George Town	3 677	5 101	6 030	6 790
Lilydale	6 744	7 841	8 300	8 830
Longford	6 762	5 354	5 140	5 430
St Leonards	11 032	13 660	16 080	18 400
Westbury	4 581	4 964	4 860	5 530
Tamar	86 646	90 879	92 740	97 030
Campbell Town	1 893	1 753	1 640	1 620
Fingal	4 475	3 791	3 440	2 930
Flinders	1 407	1 234	970	980
Portland	1 274	1 391	1 500	1 650
Ringarooma	3 056	2 866	2 470	2 260
Ross	672	617	540	550
Scottsdale	3 417	3 628	3 610	3 980
North Eastern	16 194	15 280	14 170	13 970
NORTHERN	102 840	106 159	106 910	111 000
Burnie	16 745	18 611	19 940	19 620
Circular Head	7 733	7 884	7 980	7 770
Devonport	14 276	16 758	19 790	21 550
Kentish	4 167	5 614	5 320	4 110
King Island	2 784	2 462	2 790	2 750
Latrobe	4 367	4 807	5 110	5 570
Penguin	4 673	4 677	4 790	5 020
Ulverstone	9 365	10 150	11 050	12 190
Wynyard	8 835	9 564	10 600	11 680
North Western	72 945	80 527	87 370	90 260
Gormanston	507	540	490	400
Queenstown	4 624	4 393	5 120	4 720
Strahan	565	470	450	440
Waratah	367	698	1 940	2 080
Zeehan	3 191	3 489	4 360	5 220
Western	9 254	9 590	12 360	12 860
MERSEY-LYELL	82 199	90 117	99 730	103 120
Migratory	879	675	410	570
TASMANIA	350 340	371 436	390 220	407 360

(a) Census figures for 1961 and 1966 are as recorded; 1971 and 1976 Census figures have been adjusted for under-enumeration.

Distinction Between Urban and Rural

After the Censuses of 1954 and 1961, the Commonwealth Statistician published a population classification using the terms 'metropolitan', 'urban', and 'rural'. Delineation of the urban boundaries was subjective and the methods used were not completely comparable between states.

In order to develop an objective definition of 'urban' and 'rural' areas, Dr G. J. R. Linge of the Australian National University was commissioned by the Commonwealth Statistician to make a report.

At the 31st Conference of Statisticians in 1969, the following resolutions relating to the delimitation of urban areas based substantially on Dr Linge's report were passed:

- (i) At each Census a boundary shall be defined for each population cluster of 1 000 or more population (special rules apply to known holiday resorts). These clusters are to be known as urban centres, and are moving boundaries which are to be adjusted after each Census.
- (ii) Around each urban centre with a population of at least 100 000, a further boundary shall be defined to contain the anticipated urban development for a period of at least 20 years. This boundary which is fixed, should delimit an area which is socially and economically oriented towards the urban centre.
- (iii) In delimiting urban centres with 25 000 or more population, all contiguous census collection districts which have a population density of 200 or more persons per square kilometre shall be included (subject to certain special rules).
- (iv) Urban centres with less than 25 000 population shall be delimited subjectively (e.g. by the inspection of aerial photographs, by field inspection, etc.).

Revised Criteria, 1976

For the 1976 Population Census, the statisticians agreed that the concept of *inner* and *outer* boundary be adopted for all towns and cities with populations of 25 000 or more persons. (Previously this concept was only applied to cities with a population of at least 100 000). This decision affected Tasmania since the Launceston area met these criteria. The Launceston Statistical District was therefore established.

Populations Centred on Hobart and Launceston

Populations centred on Hobart and Launceston are compiled and published on a two boundary basis for each centre. For Hobart the two boundary concept was introduced in 1966; for Launceston in 1976. The boundaries are:

- (i) A fixed outer boundary to enclose expected urban growth over the next 20 to 30 years. For Hobart this is the Hobart Statistical Division which is broadly the cities of Hobart and Glenorchy, Clarence municipality and parts of Kingborough, New Norfolk, Brighton and Sorell municipalities. The comparable Launceston area is the Launceston Statistical District comprising the city of Launceston and parts of seven neighbouring municipalities. See Chapter two for maps of the two areas.
- (ii) A moving inner boundary which moves out towards the fixed outer boundary as urban growth occurs. Urban Hobart comprises the contiguous urban portions of the cities of Hobart and Glenorchy and of the municipalities of Clarence and Kingborough. It stretches from Granton in the north to Tarooma in the south on the western shore of the Derwent and on the eastern shore from Risdon Vale southward to Tranmere and Rokeby. Urban Launceston is the continuous area of urban development centred on Launceston City and includes parts of the municipalities of Beaconsfield, Westbury, Evandale, St Leonards and Lilydale.

The following tables give details of the components of the Hobart Statistical Division and Launceston Statistical District:

Population of Hobart Statistical Division

Components	Census 30 June 1966 (a)	Census 30 June 1971 (a)	Census 30 June 1976 (b)
Urban Hobart	119 469	129 928	132 027
Other urban centres—			
Urban New Norfolk	5 770	6 839	6 827
Urban Kingston-Blackmans Bay	3 263	3 688	6 398
Urban Sorell-Midway Point	1 652	2 029	2 231
Urban Lauderdale	916	1 329	1 923
Urban Bridgewater	(c)	(c)	2 811
Urban Dodges Ferry	(d)	(d)	(e) 442
Total other urban	11 601	13 885	20 632
Total Urban	131 070	143 813	152 659
Rural	10 241	9 403	10 001
Total Hobart Statistical Division	141 311	153 216	162 660

(a) As recorded.

(b) Adjusted for under-enumeration.

(c) Population of less than 1 000 persons and thus not classified as an urban centre.

(d) Population of less than 1 000 persons and failed to meet the housing density criterion used for holiday resorts.

(e) Although the population was less than 1 000 persons at 30 June 1976, Dodges Ferry has been included as urban in 1976 because the housing density criterion, used for holiday resorts, has been met.

Population of Launceston Statistical District

Components	Census 30 June 1966 (a)	Census 30 June 1971 (a)	Census 30 June 1976 (b)
Urban Launceston	60 456	62 241	63 629
Other urban centres—			
Urban Beauty Point	873	869	1 034
Urban George Town	4 086	4 838	5 413
Urban Longford	1 688	1 713	1 825
Urban Perth	1 002	1 112	1 166
Total other urban	7 649	8 532	9 438
Total urban	—	—	73 067
Rural	n.a.	n.a.	9 263
Total Launceston Statistical District (c)	n.a.	n.a.	82 330

(a) Figures as recorded.

(b) Adjusted for under-enumeration.

(c) Delineated in 1976.

Urban and Rural Population of Tasmania

The urban-rural proportion of each Tasmanian local government area is set out in the table below; also the proportion of the State's population contributed by each local government area. Localities are classified as urban if they have populations exceeding 1 000 persons; in the case of centres with a population of 25 000 or more, it is also necessary to have a population density of 200 or more per square kilometre (special rules have been applied in the case of holiday resorts where housing density is taken into account).

Population in Local Government Areas Classified as Urban or Rural at Census, 30 June 1976

Local government area (statistical division and sub-division in bold type)	Persons		Rural	Urban Hobart	Urban Launceston	Other Urban
	Number	Per cent				
Hobart (H)	50 570	12.41	738	49 832	—	—
Glenorchy (H)	42 600	10.46	979	41 621	—	—
Clarence (H)	42 360	10.40	2 833	37 604	—	1 923
Brighton (H) (S)	4 970	1.22	2 159	—	—	2 811
Kingborough (H) (S)	13 940	3.42	4 572	2 970	—	6 398
New Norfolk (H) (S)	10 240	2.51	3 413	—	—	6 827
Sorell (H) (S)	4 350	1.07	2 119	—	—	2 231
Bothwell (S)	840	0.21	840	—	—	—
Bruny (S)	320	0.08	320	—	—	—
Esperance (S)	3 180	0.78	3 180	—	—	—
Glamorgan (S)	1 330	0.33	907	—	—	423
Green Ponds (S)	870	0.21	870	—	—	—
Hamilton (S)	3 550	0.87	3 550	—	—	—
Huon (S)	4 870	1.20	3 500	—	—	1 370
Oatlands (S)	2 210	0.54	2 210	—	—	—
Port Cygnet (S)	2 060	0.51	2 060	—	—	—
Richmond (S)	1 690	0.41	1 690	—	—	—
Spring Bay (S)	1 770	0.43	1 411	—	—	359
Tasman (S)	950	0.23	950	—	—	—
HOBERT (a)	162 660	39.93	10 443	132 027	—	20 190
SOUTHERN (a)	30 010	7.37	27 858	—	—	2 152
Launceston	33 080	8.12	—	—	33 080	—
Beaconsfield	12 550	3.08	5 950	—	5 566	1 034
Deloraine	4 820	1.18	2 936	—	—	1 884
Evandale	1 600	0.39	1 555	—	45	—
George Town	6 790	1.67	1 377	—	—	5 413
Lilydale	8 830	2.17	2 351	—	6 479	—
Longford	5 430	1.33	2 439	—	—	2 991
St.Leonards	18 400	4.52	1 127	—	17 273	—
Westbury	5 530	1.36	3 316	—	1 186	1 028
Tamar	97 030	23.82	21 051	—	63 629	12 350
Campbell Town	1 620	0.39	1 620	—	—	—
Fingal	2 930	0.72	2 930	—	—	—
Flinders	980	0.24	980	—	—	—
Portland	1 650	0.41	1 650	—	—	—
Ringarooma	2 260	0.55	2 260	—	—	—
Ross	550	0.14	550	—	—	—
Scottsdale	3 980	0.98	1 384	—	—	2 596
North Eastern	13 970	3.43	11 374	—	—	2 596
NORTHERN	111 000	27.25	32 425	—	63 629	14 946
Burnie	19 620	4.82	3 290	—	—	16 330
Circular Head	7 770	1.91	4 463	—	—	3 307
Devonport	21 550	5.29	2 077	—	—	19 473
Kentish	4 110	1.01	4 110	—	—	—
King Island	2 750	0.68	2 750	—	—	—
Latrobe	5 570	1.37	2 353	—	—	3 217
Penguin	5 020	1.23	2 462	—	—	2 558
Ulverstone	12 190	2.99	3 202	—	—	8 988
Wynyard	11 680	2.87	4 377	—	—	7 303
North Western	90 260	22.16	29 084	—	—	61 176
Gomanston	400	0.10	400	—	—	—
Queenstown	4 720	1.16	100	—	—	4 620
Strahan	440	0.11	440	—	—	—
Waratah	2 080	0.51	868	—	—	1 212
Zeehan	5 220	1.28	837	—	—	4 383
Western	12 860	3.16	2 645	—	—	10 215
MERSEY-LYELL	103 120	25.31	31 729	—	—	71 391
Migratory	570	—	—	—	—	—
TASMANIA	407 360	100.00	102 455	132 027	63 629	108 679

(a) Adjusted for under-enumeration.

Details of Urban Centres and Bounded Localities

The next table shows the population of each urban centre and bounded locality as determined at the 1971 and 1976 Censuses:

Population of Urban Centres and Bounded Localities (a) at Censuses of 30 June 1971 and 1976

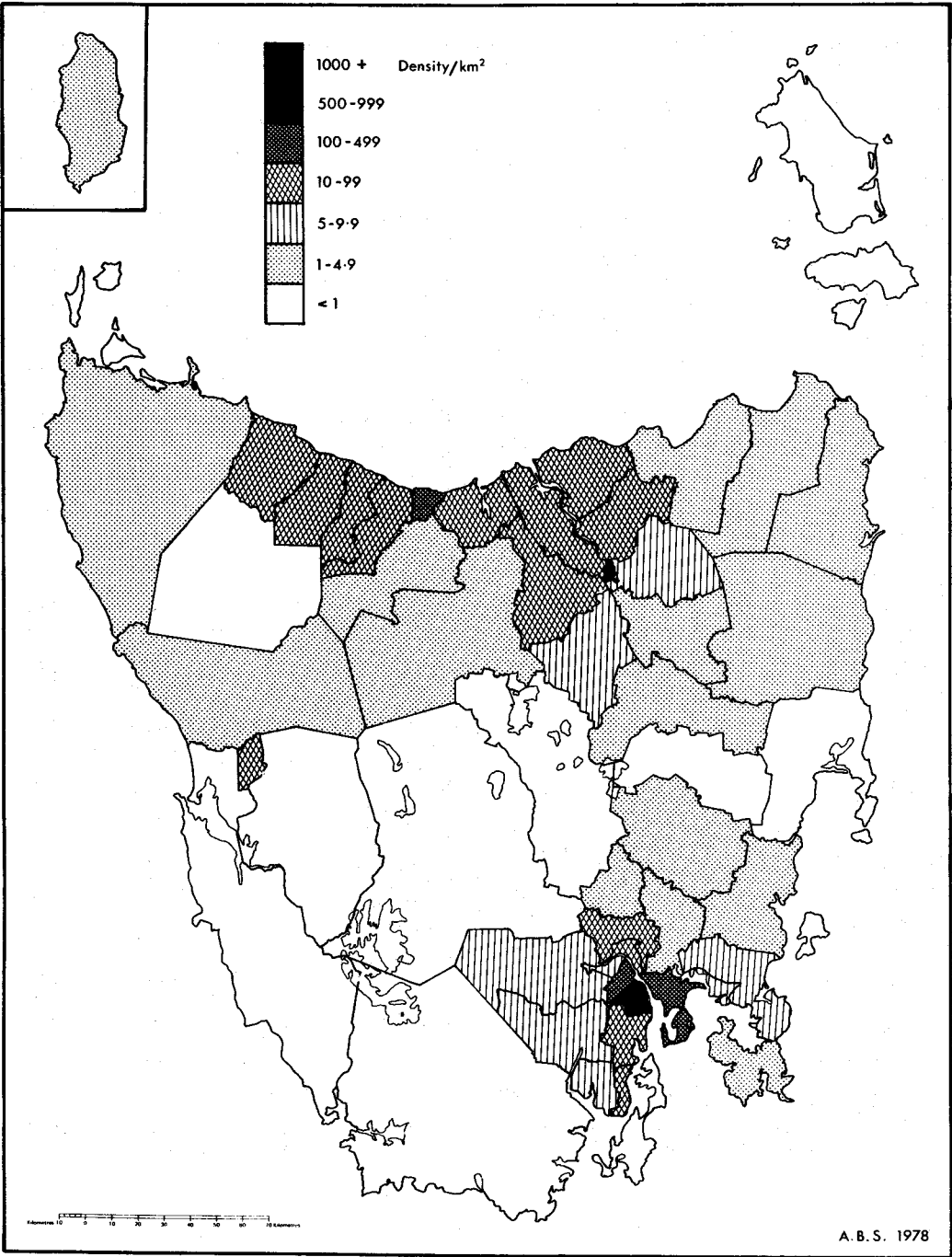
Urban centre or bounded locality	1971 census (b)	1976 census (c)	Urban centre or bounded locality	1971 census (b)	1976 census (c)
Avoca	251	207	Luina	458	521
Beaconsfield	950	936	Margate	353	392
Beauty Point	869	1 034	Maydena	527	537
Bicheno	284	414	Mole Creek	287	300
Bothwell	386	389	New Norfolk	6 839	6 827
Bracknell	274	271	Oatlands	548	553
Branxholm	262	275	Orford	312	351
Bridgewater	229	2 811	Penguin	2 294	2 558
Bridport	591	725	Perth	1 112	1 166
Burnie-Somerset	20 087	19 189	Poatina	216	213
Campbell Town	916	936	Pontville	482	809
Carrick	..	227	Port Sorell	564	772
Cremorne	..	259	Queenstown	5 025	4 620
Cressy	630	621	Railton	933	926
Currie	913	861	Richmond	491	515
Cygnets	708	720	Ridgley	474	513
Deloraine	1 812	1 884	Ringarooma	270	287
Derby	243	202	Rosebery	2 380	2 590
Devonport	18 183	19 473	Ross	279	301
Dodges Ferry	..	442	Rossarden	624	291
Dover	462	408	St Helens	825	817
Dunalley	270	247	St Marys	745	677
Electrona	243	251	Savage River	1 208	1 212
Evandale	472	529	Scottsdale	1 815	1 855
Exeter	324	347	Seven Mile Beach	343	464
Fingal	446	430	Sheffield	795	833
Forth	338	227	Smithton	3 208	3 307
Franklin	587	530	Snug	530	668
Geeveston	958	900	Sorell-Midway Point	2 029	2 231
George Town	4 838	5 413	Stanley	715	650
Gormanston	409	358	Strahan	429	416
Grassy	767	718	Strathgordon	1 270	912
Gravelly Beach	466	522	Sulphur Creek	421	401
Hadspen	395	619	Swansea	372	376
Hamilton	212	222	Tarraleah	524	495
Heybridge	388	378	Triabunna	591	881
Hobart	129 928	132 027	Tullah	..	267
Huonville-Ranelagh	1 317	1 370	Turners Beach	461	659
Kettering	232	285	Ulverstone	8 009	8 988
Kingston-Blackmans Bay	3 688	6 398	Waratah	217	246
Lanena-Blackwall	464	455	Westbury	965	1 028
Latrobe	2 464	2 428	Westerway	255	202
Lauderdale	1 329	1 923	Woodbridge	327	300
Launceston	62 241	63 629	Wynard	4 006	4 444
Lilydale	307	316	Yolla	..	205
Longford	1 713	1 825	Zeehan	1 471	1 793
Low Head	263	275			

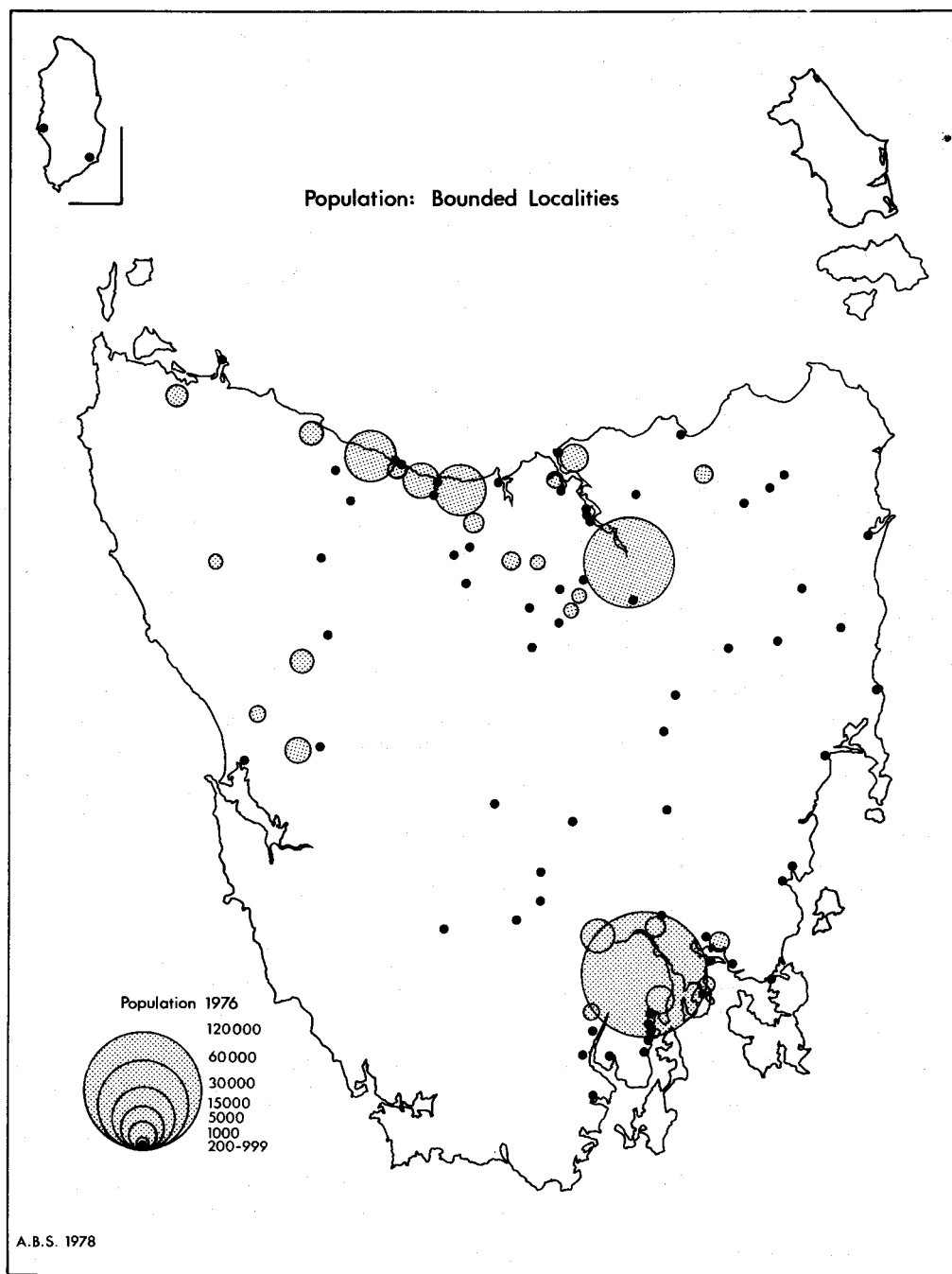
(a) Bounded localities are population clusters of 200 to 999 persons.

(b) As recorded.

(c) Urban centres (localities with 1 000 or more persons recorded at Census) have been *adjusted* for under-enumeration. Localities with less than 1 000 persons are *as recorded*.

Population Density: Tasmanian Municipalities, 1977





1976 CENSUS: CHARACTERISTICS OF THE POPULATION

The Bureau runs the Census every five years under the authority of the *Census and Statistics Act 1905*. It is not merely a head count. A wide range of characteristics useful to demographers, social workers, economists, planners, etc., are collected. The Census is conducted on a *de facto* basis, i.e. persons are counted where they spent census night regardless of where they usually live. Some data on place of usual residence are also collected and some tables based on usual residence are available from the Census.

Processing the 1976 Census

The 1976 Census was processed in two phases. Preliminary processing was undertaken by State offices of the Bureau. A complete count of the population classified by age, sex, marital status, birthplace (Australia, United Kingdom, other) was produced. Government budgetary decisions caused further processing to be delayed until 1977-78. Before final processing began further financial cuts were imposed and the Bureau had to review its processing plans. The decision was made that a sample of schedules would be processed at the final phase. The sample scheme adopted was:

- (i) Process all schedules from non-private dwellings (motels, hostels, gaols, etc.).
- (ii) Process all schedules from private dwellings in the Northern Territory.
- (iii) Process 50 per cent of schedules from private dwellings in all other states and the A.C.T. This sample was selected as the collection district (CD) level by randomly selecting either the first or second private dwellings in the CD and then systematically taking every second private dwelling after that. All persons within selected dwellings were included in the sample.

When determining the best sample scheme consideration was given to: (i) the need to provide sufficiently accurate estimates of different categories of people (hence the decision to process all schedules from non-private dwellings and the Northern Territory), and (ii) the ease with which the sample could be manually selected during processing.

The sample size for Australia was 6.5 million persons. This huge sample ensured adequate representation of all components of the Australian population and reliable estimates for minority groups.

It should be noted that a sample of 50 per cent of private dwellings in a CD would not necessarily contain 50 per cent of the people living in private dwellings in that CD. Therefore, CD sample counts were not multiplied by two to get a CD estimate. A factor, usually very close to two, was applied. Factors were chosen so as to give male and female counts which were consistent with the preliminary processing CD counts. Final counts of dwellings were obtained by multiplying by two.

The following points should be noted:

- (i) Since only 50 per cent of private dwelling schedules were processed it is likely that estimates differ from the results that would have been obtained if all returns had been processed. In general terms the larger the estimate the closer it should be to the answer given by a full count. For a full explanation of sampling and its effects upon census estimates see *Making Sense of the Census*, (Catalogue number 2129.0). This booklet is available free of charge from any Bureau office.
- (ii) Because the estimates are based on a sample count multiplied by a decimalised factor, rounding has been carried out for tabulation and publication purposes. During the rounding: (a) 'males' plus 'females' will not always equal 'persons'; and (b) males, females and persons by characteristics will not always add to their respective totals.
- (iii) *The counts shown in the census tables in this section have not been adjusted for under-enumeration.* This was higher for the 1976 Census than for the 1971 Census.
- (iv) Generally, response to questions was not as good in 1976 as 1971. Consequently 'not stated' for 1976 Census results is usually higher.

The above points should be borne in mind when comparing details from the 1971 and 1976 Census analyses. The following tables are only a small selection of the range of population classifications available from the Census.

Marital Status

Marital status of the population at the 1971 and 1976 Censuses is shown in the next table:

Marital Status of the Population at 30 June

Particulars	Census 1971		Census 1976			
	Persons	Proportion of total	Males	Females	Persons	Proportion of total
	no.	per cent	no.	no.	no.	per cent
Never married—						
Under 15 years	121 323	31.1	59 044	56 621	115 665	28.7
15 years and over	65 213	16.7	40 207	30 022	70 229	17.4
Total	186 536	47.8	99 251	86 643	185 894	46.1
Married	177 057	45.4	92 787	92 269	185 056	45.9
Permanently separated	4 798	1.2	3 029	3 680	6 710	1.7
Divorced	3 401	0.9	2 650	3 219	5 868	1.5
Widowed	18 621	4.8	3 795	15 545	19 340	4.8
Total	390 413	100.0	201 512	201 356	402 868	100.0

Age Distribution of the Population

Age is a basic characteristic collected at Census. The following table shows the age distribution of the Tasmanian population at the 1971 and 1976 Censuses:

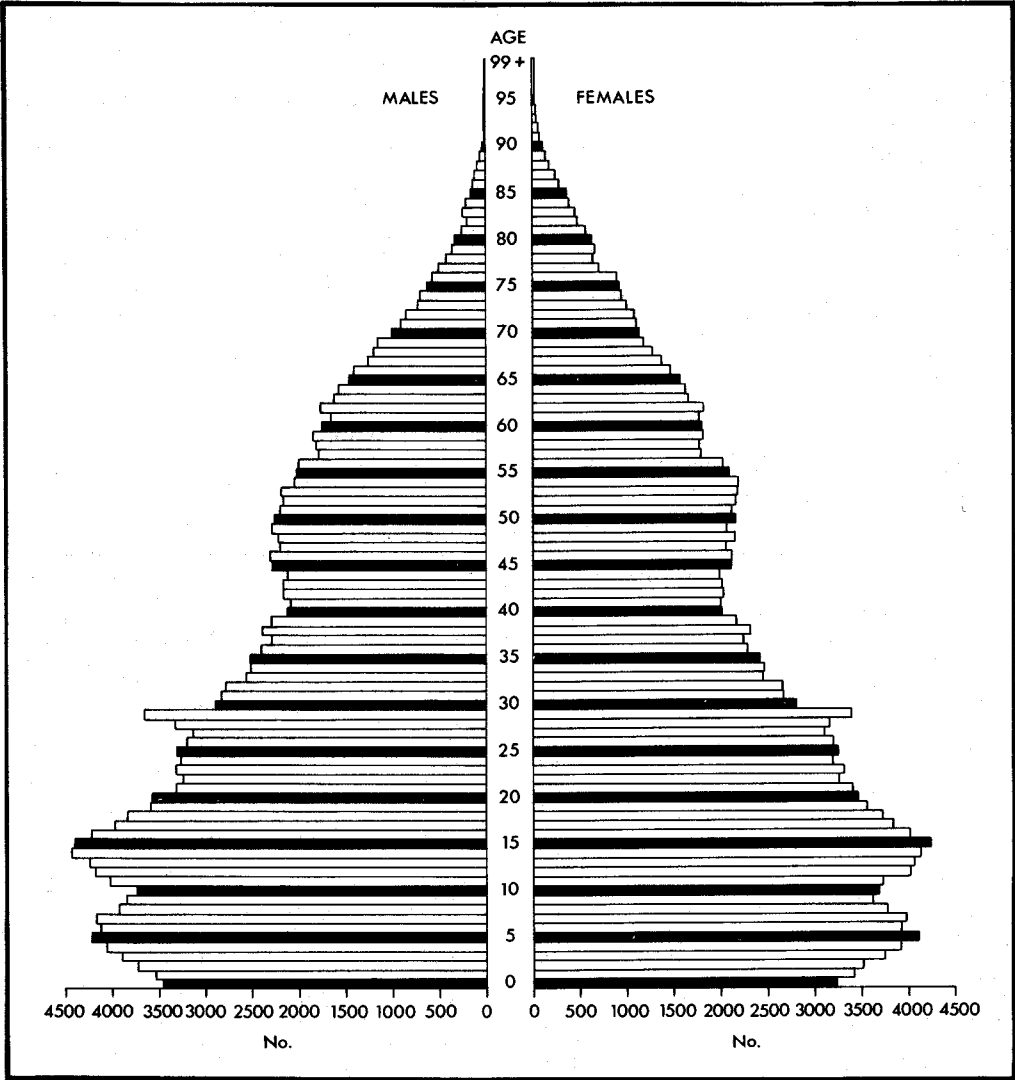
Age Distribution at 30 June

Age at last birthday	Census 1971		Census 1976			
	Persons	Proportion of total	Males	Females	Persons	Proportion of total
Years	no.	per cent	no.	no.	no.	per cent
0-4	39 325	10.1	18 397	17 847	36 244	9.0
5-9	40 355	10.3	20 066	19 197	39 263	9.7
10-14	41 643	10.7	20 581	19 577	40 158	10.0
15-19	35 876	9.2	19 516	19 234	38 751	9.6
20-24	31 767	8.1	16 354	16 257	32 611	8.1
25-29	26 380	6.8	16 408	16 093	32 501	8.1
30-34	23 314	6.0	13 470	12 854	26 324	6.5
35-39	21 425	5.5	11 901	11 397	23 299	5.8
40-44	22 691	5.8	10 413	10 023	20 436	5.1
45-49	23 056	5.9	11 130	10 389	21 519	5.3
50-54	19 985	5.1	10 898	10 815	21 713	5.4
55-59	18 514	4.7	9 212	9 361	18 573	4.6
60-64	15 045	3.9	8 284	8 476	16 760	4.2
65-69	11 257	2.9	6 430	6 765	13 195	3.3
70-74	8 463	2.2	4 098	5 182	9 280	2.3
75 and over	11 317	2.9	4 356	7 888	12 244	3.0
Total	390 413	100.0	201 512	201 356	402 868	100.0

In the above table no adjustment has been made for under-enumeration. In addition, the under-enumeration was not evenly spread across all age groups. Users interested in looking at intercensal changes in age groups should refer to age tables adjusted for under-enumeration which have been compiled by the Bureau and are available on request.

The following population pyramid shows the age and sex structure of the Tasmanian population at 30 June 1976. Figures used are based on the 1976 Census and have been adjusted for under-enumeration.

Age and Sex Structure of the Population, 30 June 1976.



Birthplace, Period of Residence and Languages Used

The following tables indicate, among other things, the effect that overseas immigration has had upon the Tasmanian population. The impact on Tasmania has been considerably less than for other Australian states.

Birthplaces of the Population at 30 June

Birthplace	Census 1971		Census 1976			
	Persons	Proportion of total	Males	Females	Persons	Proportion of total
	no.	per cent	no.	no.	no.	per cent
Australia	350 150	89.7	179 693	182 173	361 866	89.8
New Zealand	1 550	0.4	885	916	1 801	0.4
United Kingdom and Eire	22 513	5.8	11 613	11 300	22 913	5.7
Germany	2 009	0.5	1 004	882	1 886	0.5
Greece	911	0.2	477	377	854	0.2
Italy	1 485	0.4	891	532	1 423	0.4
Netherlands	3 183	0.8	1 579	1 337	2 916	0.7
Poland	1 456	0.4	875	497	1 372	0.3
Yugoslavia	1 020	0.3	592	294	886	0.2
Other Europe	2 797	0.7	1 866	1 073	2 939	0.7
Total Europe	35 374	9.1	18 897	16 292	35 189	8.7
Asia	1 666	0.4	887	813	1 700	0.4
Africa	695	0.2	363	370	733	0.2
America	669	0.2	569	535	1 104	0.3
Other	309	0.1	218	259	477	0.1
Total	390 413	100.0	201 512	201 356	402 868	100.0

At the 1976 Census of the 41 002 persons with an overseas birthplace, 18 340 gave their citizenship as Australian.

The next two tables analyse the overseas born and Australian born by birthplace of parents:

Birthplace of Parents of the Overseas Born Population, Census 30 June 1976
(Persons)

Birthplace of father	Birthplace of mother					
	Australia	United Kingdom and Eire	Other Europe	Other	Not stated	Total overseas born
Australia	695	318	57	244	6	1 318
United Kingdom and Eire	456	21 764	194	489	86	22 989
Other Europe	114	199	11 674	104	109	12 200
Other	225	374	65	3 031	31	3 724
Not stated	7	78	87	17	580	770
Total overseas born	1 496	22 734	12 078	3 883	813	41 002

Birthplace of Parents of the Australian Born Population, Census 30 June 1976
(Persons)

Birthplace of father	Birthplace of mother					
	Australia	United Kingdom and Eire	Other Europe	Other	Not stated	Total Australian born
Australia	305 584	7 223	1 537	1 618	1 879	317 839
United Kingdom and Eire	11 413	5 639	304	336	68	17 761
Other Europe	5 311	527	5 387	121	31	11 377
Other	2 123	251	86	420	6	2 885
Not stated	1 788	81	65	16	10 055	12 004
Total Australian born	326 220	13 721	7 377	2 509	12 038	361 866

The next table gives details of the period of residence in Australia for those Tasmanians born overseas. For 1976 there was a high level of non-response to this question. (It was confirmed as a response problem and not a programming or processing error.) The question had been tested in pilot tests prior to the 1976 Census and it had then been much more acceptable.

Period of Residence in Australia of Persons Born Overseas at 30 June

Period of residence in Australia	Overseas born					
	Census 1971		Census 1976			
	Persons	Proportion of total overseas born	Males	Females	Persons	Proportion of total overseas born
	no.	per cent	no.	no.	no.	per cent
Residents—						
Under 1 year	1 874	4.7	386	405	791	1.9
1 year and under 2	2 015	5.0	556	557	1 113	2.7
2 years and under 3	1 979	4.9	410	410	820	2.0
3 years and under 4	1 540	3.8	377	365	742	1.8
4 years and under 5	1 515	3.8	467	469	936	2.3
5 years and under 10	5 569	13.8	2 825	2 591	5 416	13.2
10 years and over	23 701	58.9	9 087	7 585	16 672	40.7
Not stated	1 095	2.7	7 241	6 528	13 769	33.6
Total residents	39 288	97.6	21 349	18 910	40 258	98.2
Visitors	975	2.4	471	273	744	1.8
Total overseas born	40 263	100.0	21 819	19 183	41 002	100.0

In the 1976 Census a language usage question was asked for the first time. This question was asked for all persons aged five years and over. It referred to languages regularly used, *not* all languages that could be spoken or understood by respondents. The usage or otherwise of English can be used as an indicator of the degree of assimilation of migrants.

**Use of the English Language by Population Aged Five Years and Over
Census 30 June 1976**

Language usage	Australian born		Overseas born		Total 5 years and over	
	Persons	Proportion of total	Persons	Proportion of total	Persons	Proportion of total
	no.	per cent	no.	per cent	no.	per cent
English only	308 398	94.5	29 432	72.8	337 829	92.1
English plus—one other	4 044	1.2	8 155	20.2	12 199	3.3
two other	622	0.2	1 280	3.2	1 902	0.5
No English	128	—	536	1.3	664	0.2
Not stated	13 031	4.0	1 000	2.5	14 031	3.8
Total population 5 years and over	326 222	100.0	40 402	100.0	366 624	100.0

Occupational Status

The following table shows the occupational status of the Tasmanian population at 30 June 1976:

Population by Occupational Status at 30 June

Occupational status	Census 1971		Census 1976			
	Persons	Proportion of labour force	Males	Females	Persons	Proportion of labour force
	no.	per cent	no.	no.	no.	per cent
In labour force—						
Employed—						
Employer, self-employed	18 902	12.3	15 390	6 070	21 460	12.6
Wage and salary earner (a)	130 276	85.0	92 447	47 254	139 701	81.9
Unpaid helper	1 037	0.7	441	2 344	2 786	1.6
Total employed	150 215	98.0	108 278	55 668	163 946	96.1
Unemployed	3 047	2.0	4 002	2 676	6 679	3.9
Total labour force	153 262	100.0	112 281	58 344	170 625	100.0
Not in labour force—						
15 years and over	237 151	..	30 188	86 391	116 578	..
Under 15 years			59 044	56 621	115 665	..
Total	237 151	..	89 232	143 012	232 243	..
Total population	390 413	..	201 512	201 356	402 868	..

(a) In 1971 'wage and salary earners' were tabulated as 'employees'.

Australia follows international definitions in defining the labour force which was defined as comprising persons: (i) who worked for payment or profit; (ii) who had a job from which they were temporarily absent (e.g. on holiday, sick); (iii) who were temporarily laid-off without pay; and (iv) who did not have a job and were actively looking for work.

Industry of the Population

At the Census details were obtained about: (i) the type of work done (occupation) by the employed; and (ii) the establishment, firm, business in which the employed worked. Type of work done is the basis for occupational classification; there may be many different occupations within a single firm. Type of productive activity carried on by the business is the basis for industry coding. All employees of a single establishment have the same industry classification. The next table shows employed persons by industry classification:

Employed Population in the Labour Force at 30 June by Industry

Industry	Census 1971		Census 1976			
	Persons	Proportion of total employed	Males	Females	Persons	Proportion of total employed
	no.	per cent	no.	no.	no.	per cent
Agriculture, etc.—						
Agriculture and service to agriculture	12 085	8.0	7 932	2 947	10 879	6.6
Forestry and logging	1 136	0.8	1 268	67	1 335	0.8
Fishing and hunting	551	0.4	426	69	495	0.3
Not stated	—	—	5	2	7	—
Total agriculture, etc.	13 772	9.2	9 631	3 085	12 717	7.8
Mining	4 579	3.0	3 954	258	4 212	2.6
Manufacturing	31 532	21.0	22 796	4 874	27 670	16.9
Electricity, gas and water	3 682	2.5	2 951	230	3 181	1.9
Construction	12 917	8.6	11 732	860	12 592	7.7
Wholesale and retail trade	27 116	18.1	17 930	11 214	29 144	17.8

Employed Population in the Labour Force at 30 June by Industry—continued

Industry	Census 1971		Census 1976			
	Persons	Proportion of total employed	Males	Females	Persons	Proportion of total employed
	no.	per cent	no.	no.	no.	per cent
Transport and storage	7 595	5.1	7 401	866	8 267	5.0
Communication	3 237	2.2	2 436	700	3 136	1.9
Finance, insurance, real estate and business services	7 822	5.2	5 649	4 212	9 861	6.0
Public administration and defence	7 210	4.8	5 447	2 318	7 765	4.7
Community services	17 760	11.8	8 876	15 634	24 511	15.0
Entertainment, recreation, restaurants, hotels and personal services	7 617	5.1	4 164	5 328	9 491	5.8
Other and not stated	5 376	3.6	5 312	6 088	11 400	7.0
Total employed	150 215	100.0	108 278	55 668	163 946	100.0

Religions of the Population

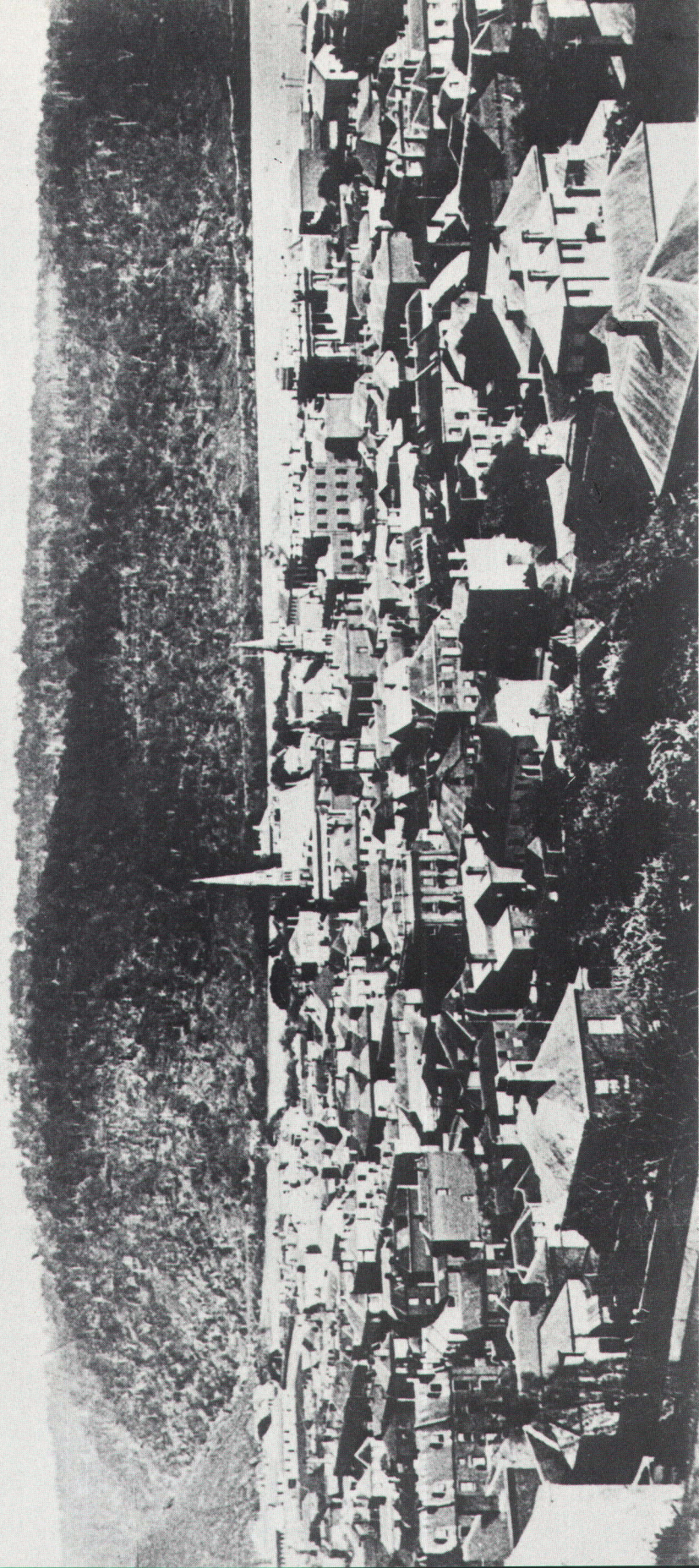
The question on religion is not compulsory. Results of the 1971 and 1976 Census counts for religion are shown in the next table:

Religions of the Population at 30 June

Religion	Census 1971		Census 1976			
	Persons	Proportion of total	Males	Females	Persons	Proportion of total
	no.	per cent	no.	no.	no.	per cent
Christian—						
Baptist	8 039	2.1	3 799	4 141	7 940	2.0
Catholic	77 250	19.8	37 165	37 927	75 092	18.6
Church of England	169 089	43.3	78 207	80 542	158 749	39.4
Lutheran	1 837	0.5	870	843	1 712	0.4
Methodist	42 173	10.8	17 794	19 313	37 107	9.2
Presbyterian	17 281	4.4	7 105	7 794	14 899	3.7
Other Christian	28 726	7.4	13 626	15 118	28 744	7.1
Total Christian	344 395	88.2	158 567	165 677	324 244	80.5
Non-Christian—						
Hebrew	98	—	60	61	121	—
Muslim	133	—	92	43	135	—
Other non-Christian	330	0.1	303	220	523	0.1
Total non-Christian	561	0.1	454	325	779	0.2
Not classifiable	993	0.3	1 229	993	2 223	0.6
No religion	20 221	5.2	15 987	11 637	27 625	6.9
Not stated	24 243	6.2	25 274	22 724	47 998	11.9
Total	390 413	100.0	201 512	201 356	402 868	100.0

Income

The 1976 Census included a question on income. Users of statistics regard income as a basic variable. Cross-classification of various characteristics of the population by income allows an accurate socio-economic portrait of the population to be built up. The 1976 Census asked people to state the level of income received by ticking one of 14 categories. All income was to be included (e.g. child endowment, scholarships, interest payments, and no deductions for taxation, superannuation, etc., were to be made. The next table shows the population aged 15 years and over by the level of annual personal income received:



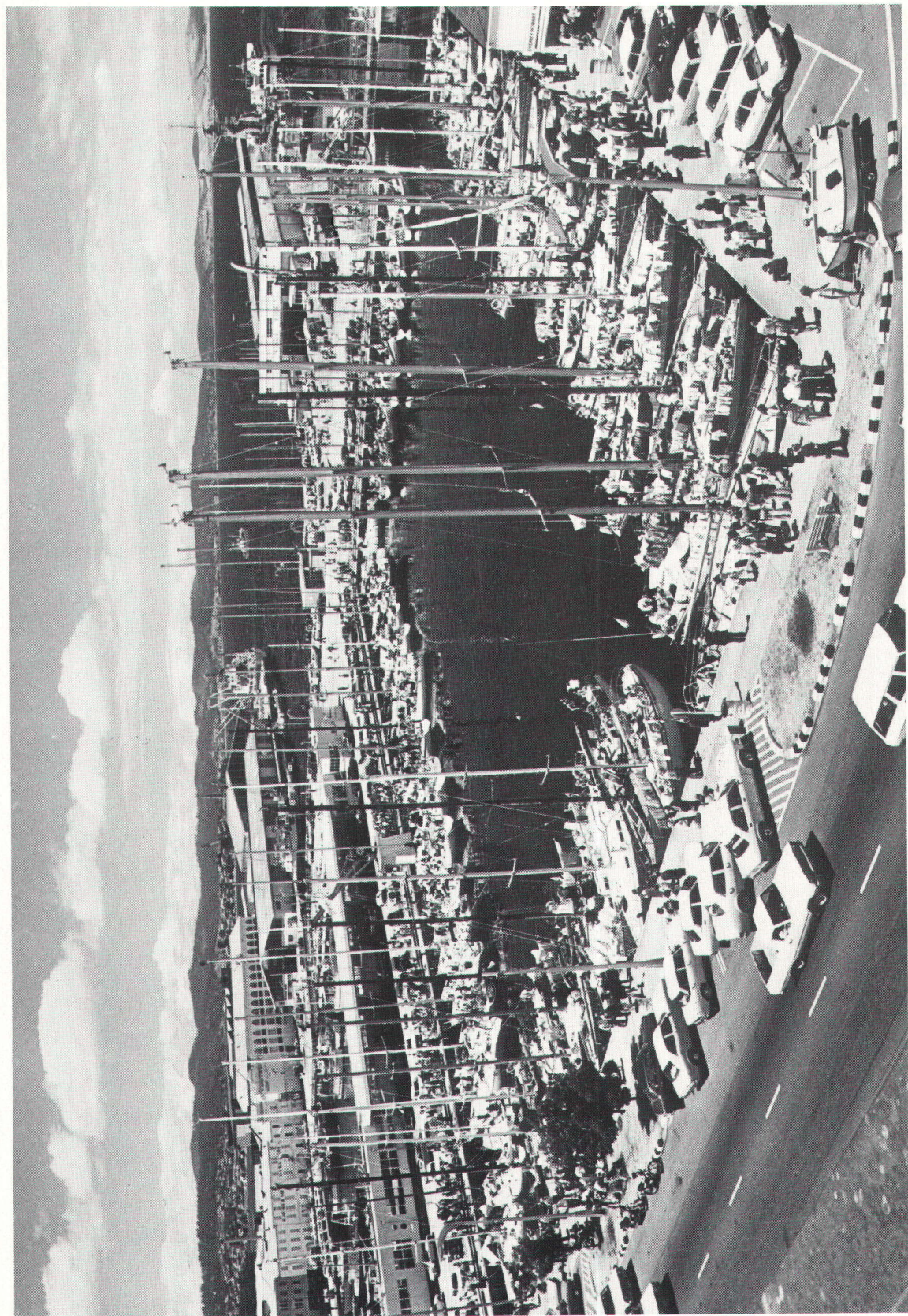
Launceston, a view from Windmill Hill, c. 1870

[By courtesy of the Archives Office of Tasmania]



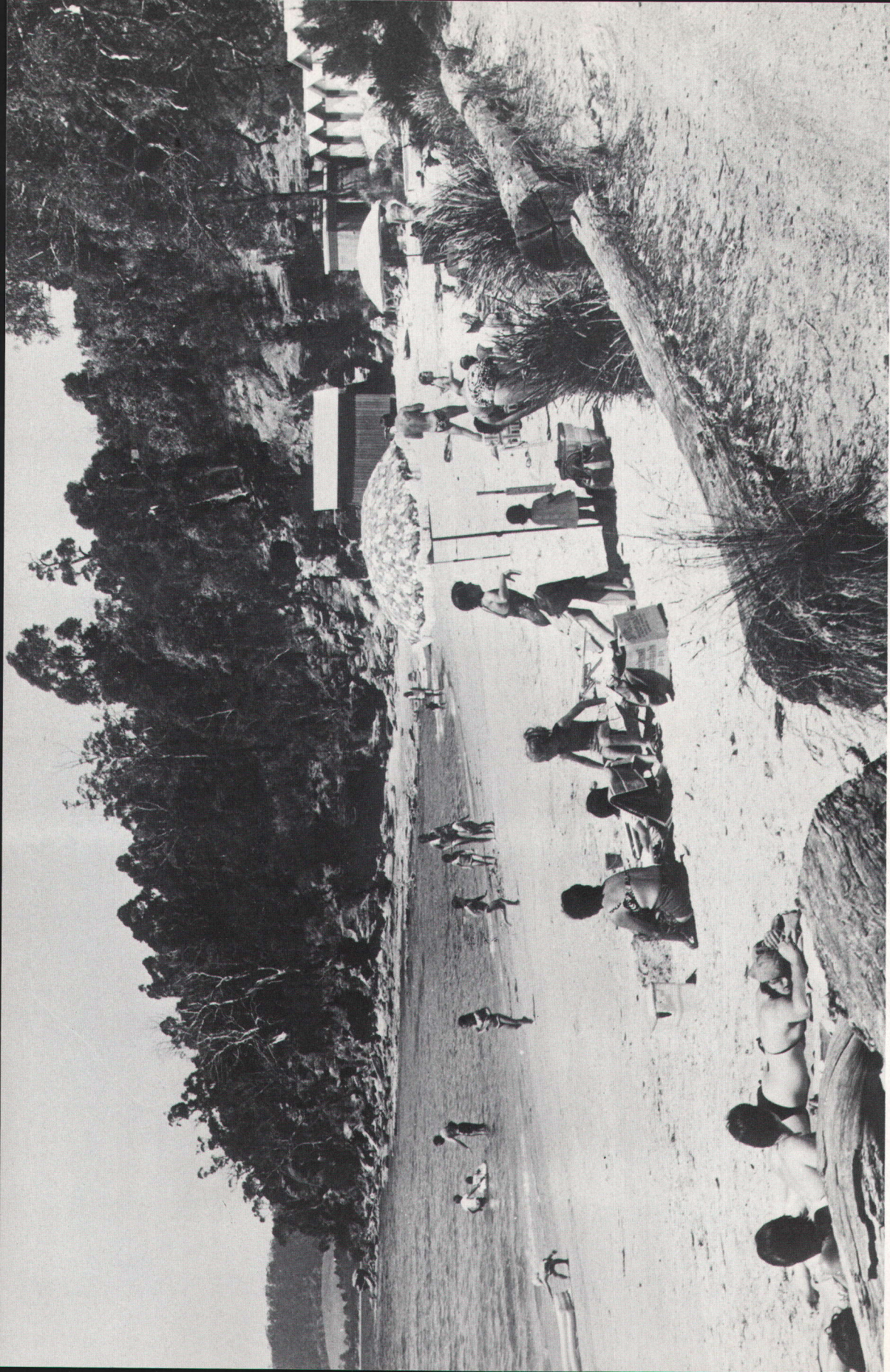
St. Columba Falls

[Tasmanian Film Corporation]



Sydney-Hobart Yacht Race, Constitution Dock

[D. Stephens and Associates]



Conningham Beach

**Annual Personal Income Received by Population Aged 15 Years and Over
at Census 30 June 1976**

Income—amount per annum (\$)	Males	Females	Persons	Proportion of total
Nil	9 689	34 779	44 468	15.5
Less than 1 500	2 823	16 601	19 424	6.8
1 500 to 2 000	8 488	13 385	21 872	7.6
Over 2 000 to 3 000	10 224	20 208	30 431	10.6
Over 3 000 to 4 000	6 793	10 179	16 973	5.9
Over 4 000 to 5 000	7 399	8 402	15 801	5.5
Over 5 000 to 6 000	12 434	7 719	20 153	7.0
Over 6 000 to 7 000	16 986	7 310	24 297	8.5
Over 7 000 to 8 000	16 750	4 325	21 075	7.3
Over 8 000 to 9 000	13 582	2 572	16 154	5.6
Over 9 000 to 12 000	18 097	3 263	21 360	7.4
Over 12 000 to 15 000	6 594	854	7 448	2.6
Over 15 000 to 18 000	2 659	207	2 866	1.0
Over 18 000	2 838	198	3 036	1.1
Not stated	7 112	14 734	21 846	7.6
Total population aged 15 years and over	142 468	144 735	287 203	100.0

The following table classifies families in private dwellings according to level of family income received. For Census purposes *family income* is defined as the combined incomes of the head and spouse, when both are present, or the individual income of the head where no spouse is present.

**Family Income: Families in Private Dwellings (Excluding Communes)
Census 30 June 1976**

Income— amount per annum (\$)	Number of families	Proportion of total	Cumulative proportion of total
Nil	2 040	per cent 1.6	per cent 1.6
Less than 1 500	1 334	1.1	2.7
1 500 to 2 000	3 204	2.6	5.3
Over 2 000 to 3 000	10 836	8.7	14.0
Over 3 000 to 4 000	9 120	7.3	21.3
Over 4 000 to 5 000	5 244	4.2	25.5
Over 5 000 to 6 000	7 288	5.8	31.3
Over 6 000 to 7 000	8 828	7.1	38.4
Over 7 000 to 8 000	10 002	8.0	46.5
Over 8 000 to 9 000	9 046	7.3	53.7
Over 9 000 to 12 000	17 866	14.3	68.0
Over 12 000 to 15 000	11 918	9.6	77.6
Over 15 000 to 18 000	7 186	5.8	83.4
Over 18 000	7 100	5.7	89.1
Not stated	13 612	10.9	100.0
Total families in private dwellings (excl. communes)	124 624	100.0	...

Family Type

The next table analyses families in private dwellings according to family type and head of family. In the 1976 Census 'Commune' was recognised as a family type for the first time. It consists of head (who is also head of the household) and all commune members. Many communes may not have been identified in the Census since, to be classified as a commune, all the respondents had to describe themselves as commune members.

**Families in Private Dwellings: By Family Type and Sex of Head of Family
Census 30 June 1976**

Family type	Head of family		Total families	
	Male	Female	Number	Proportion of Total
	no.	no.		per cent
Head only	9 694	13 242	22 936	18.4
Head, children only	850	4 288	5 138	4.1
Head, spouse only	27 316	774	28 090	22.5
Head, spouse, children	37 786	480	38 266	30.7
Head, other adults only	1 868	3 608	5 476	4.4
Head, other adults, children	442	1 472	1 914	1.5
Head, spouse, other adults	10 106	170	10 276	8.2
Head, spouse, other adults, children	12 384	144	12 528	10.1
Commune	26	4	30	—
Total families in private dwellings	100 472	24 182	124 654	100.0

VITAL STATISTICS

Summary of Principal Statistics

Vital statistics (births, deaths and marriages) are compiled from details registered with the Registrar-General of Tasmania and refer to registrations processed during the periods specified. The principal number and rates relating to vital statistics in Tasmania for recent years are given in the following table:

Summary of Vital Statistics

Year	Number registered				Rate per 1 000 of mean population			Infant mortality (deaths under one year per 1 000 live births)
	Marriages	Live births	Deaths	Infant deaths (a)	Marriages	Live births	Deaths	
1972	3 426	7 824	3 227	127	r 8.73	r 19.94	r 8.22	16.2
1973	3 395	7 326	3 347	137	r 8.58	r 18.51	r 8.46	18.7
1974	3 567	7 398	3 484	123	r 8.93	r 18.51	r 8.72	16.6
1975	3 242	6 982	r 3 340	128	8.01	r 17.26	r 8.26	18.3
1976	3 477	6 702	3 389	77	r 8.53	r 16.45	8.32	11.5
1977	3 166	6 735	3 269	99	7.71	16.40	7.96	14.7

(a) Deaths under one year; included also in total deaths.

Crude Rate Comparisons

The rates per 1 000 of mean population for births, deaths and marriages are referred to as *crude rates*. It will be seen, in regard to marriages, that not *all* the population is 'at risk', children and those already married being obvious excluded examples. Similarly, births are clearly events related to certain fertile age groups of women and not to the total population; births also are related to the number of married persons and to the age structure of the married proportion of the community. Finally, deaths have a definite relationship with the numbers of each sex and the age structure of the community. Crude rates are valid measures of comparison in the short term only.

Subject to this limitation, the following Tasmanian historical comparisons exist as from 1880:

- (i) Crude marriage rate: highest 10.51 (1946); lowest 5.50 (1859 and 1896).
- (ii) Crude birth rate: highest 36.63 (1884); lowest 16.40 (1977).
- (iii) Crude death rate: highest 17.41 (1883); lowest 7.70 (1960).

It is probably significant that 1946 was the year of rapid demobilisation after World War II and that a similar marriage trend was recorded for 1919 and 1920 after World War I. The crude birth rate for 1977 (16.40 per 1 000 of mean population) is the lowest recorded. The popularly accepted theory attributes the current low figure to deliberate family planning. This is supported by the fact that, although girls born in the post-war period have now entered the ranks of those likely to marry and have therefore increased the number of potentially fertile women, the fertility rate is declining (as described in a later section under 'Births').

Review of Infant Mortality

Infant mortality relates to the number of deaths *under one year* and the rate is expressed as the number of such deaths per 1 000 live births. It follows that comparisons over long periods of time are valid and not affected by the limitations attached to crude rates. The following table shows infant mortality rates by decade from 1880 and for recent years:

Infant Mortality Rates (Deaths under One Year Per 1 000 Live Births) Selected Years from 1880

Year	Rate	Year	Rate	Year	Rate
1880.....	112.3	1930.....	50.6	1973.....	18.7
1890.....	105.6	1940.....	35.2	1974.....	16.6
1900.....	80.0	1950.....	23.8	1975.....	18.3
1910.....	101.7	1960.....	19.1	1976.....	11.5
1920.....	65.5	1970.....	14.2	1977.....	14.7

The peak year since 1880 was 1883 with a rate of 124.0. In the period 1880-1910, the annual infant mortality rate exceeded 100 on 14 occasions. There has been a steady improvement in infant mortality rates over the past 50 years. The rate for the period 1916-1920 was 64, for the year 1961, 16.8, and in 1976 a record minimum of 11.5 was achieved.

At the turn of the century, 20 to 25 per cent of all deaths were those of infants under one year. The rapid fall in infant mortality rates had a marked effect on the crude death rates as infant deaths are a component of total deaths. Infant mortality has fallen largely due to advances in medical science enabling the control of disease and the development of techniques to reduce perinatal deaths; improvements in child care and nutrition also have made a significant contribution.

Marriages

The following table summarises the number of marriages registered and the crude rate since 1880:

Marriages and Crude Marriage Rates, Selected Years from 1880

Year	Marriages		Year	Marriages	
	Number	Crude rates(a)		Number	Crude rates(a)
1880.....	840	7.39	1940.....	2 476	10.27
1890.....	954	6.66	1950.....	2 560	9.18
1900.....	1 332	7.72	1960.....	2 713	7.82
1910.....	1 493	7.82	1970.....	3 535	9.11
1920.....	1 999	9.50	1976.....	3 477	8.53
1930.....	1 450	6.56	1977.....	3 166	7.71

(a) Number of marriages per 1 000 of mean population.

The following table gives the average age of brides and bridegrooms in recent years based on 'age last birthday' figures:

Average Age of Bridegrooms and Brides (Years)

Particulars	1971	1972	1973	1974	1975	1976
Average age of bridegrooms—						
Bachelors	24.0	24.0	24.0	23.9	23.5	23.8
Widowers	55.5	56.2	57.9	58.9	57.0	55.3
Divorcees	38.7	39.5	38.4	38.5	37.3	37.7
All bridegrooms	26.0	26.1	26.1	26.0	23.7	27.0
Average age of brides—						
Spinsters	21.2	21.2	21.2	21.2	20.8	21.2
Widows	48.6	50.2	49.9	49.2	51.2	47.9
Divorcees	35.7	36.0	35.5	34.5	35.2	33.9
All brides	23.1	23.2	23.3	23.2	23.0	24.2

The next table analyses the ages of all bridegrooms and brides contracting marriages registered in 1976:

Age of Bridegrooms and Brides, 1976

Age last birthday (years)	Bridegrooms		Brides	
	Number	Per cent of total	Number	Per cent of total
Under 20	306	8.80	1 100	31.64
20-24	1 698	48.84	1 441	41.44
25-29	705	20.28	390	11.22
30-34	259	7.45	187	5.38
35-39	139	4.00	107	3.08
40-44	89	2.56	61	1.75
45-49	92	2.65	65	1.87
50-54	81	2.33	54	1.55
55-59	36	1.04	29	0.83
60-64	33	0.95	18	0.52
65 and over	39	1.12	25	0.72
Total	3 477	100.00	3 477	100.00

The following three tables show: (i) the number of persons under 21 years of age marrying; (ii) the conjugal condition of persons marrying; and (iii) marriages according to the type of marriage ceremony conducted, for a six-year period.

Marriages: Persons Under 21 Years of Age

Year	Age in Years						Persons under 21 years	
	15	16	17	18	19	20	Number	Percentage of all marriages
Bridegrooms								
1971	—	1	8	111	244	362	726	20.29
1972	—	1	8	127	235	336	707	20.64
1973	—	—	4	111	218	375	708	20.85
1974	—	—	7	144	220	393	764	21.42
1975	—	—	6	105	213	348	672	20.73
1976	—	—	4	111	191	347	653	18.78

Marriages: Persons Under 21 Years of Age—continued

Year	Age in Years						Persons under 21 years	
	15	16	17	18	19	20	Number	Percentage of all marriages
Brides								
1971.....	2	120	247	437	557	534	1 897	53.02
1972.....	8	131	247	432	490	503	1 811	52.86
1973.....	4	93	225	445	532	515	1 814	53.43
1974.....	1	88	231	483	588	507	1 898	53.21
1975.....	1	94	208	441	504	422	1 670	51.51
1976.....	1	61	169	410	459	476	1 576	45.33

Conjugal Condition of Persons Marrying

Year	Bridegrooms			Brides			Total marriages
	Bachelors	Widowers	Divorcees	Spinsters	Widows	Divorcees	
1971.....	3 214	109	255	3 224	129	225	3 578
1972.....	3 072	102	252	3 063	120	243	3 426
1973.....	3 028	102	265	3 025	118	252	3 395
1974.....	3 184	86	297	3 169	133	265	3 567
1975.....	2 844	90	308	2 863	108	271	3 242
1976.....	2 798	98	581	2 805	132	540	3 477

Marriages, Religious and Civil

Particulars of celebration	1971	1972	1973	1974	1975	1976
Religious rites—						
Church of England.....	1 359	1 332	1 265	1 350	1 147	1 067
Catholic.....	757	721	696	693	645	595
Presbyterian.....	150	161	148	155	134	128
Methodist.....	498	412	466	440	407	442
Congregational.....	43	47	53	51	31	28
Baptist.....	86	101	89	89	103	94
Churches of Christ.....	19	21	19	22	21	34
Salvation Army.....	17	26	35	38	26	17
Seventh-day Adventist.....	12	12	5	5	10	5
Other.....	112	92	112	123	114	130
Civil ceremonies (a).....	525	501	507	601	604	937
Total.....	3 578	3 426	3 395	3 567	3 242	3 477

(a) Marriages contracted before registrars.

Divorce

The *Matrimonial Causes Act* 1860, as amended, provided for divorce in Tasmania until 1 February 1961, when Australia came under a uniform divorce law, the *Matrimonial Causes Act* 1959, passed by the Federal Parliament. The *Family Law Act* 1975 came into effect on 5 January 1976, replacing the *Matrimonial Causes Act* 1959. The main changes were the creation of the Family Court of Australia and the alteration of the grounds for divorce to the sole ground of irretrievable breakdown of marriage after 12 months separation. The

commencement of the Family Court of Australia had a dramatic effect on the figures. In 1976 dissolutions of marriage represented 50.62 per cent of the number of marriages contracted for that year (1 760 dissolutions compared with 3 477 marriages).

The increase in the number of dissolutions up to 1970 is illustrated in the historical table which follows:

Dissolutions of Marriage Granted (a): Summary from 1881

Decade ending—	Maximum in decade		Minimum in decade	
	Year	Number	Year	Number
1890.....	1886	6	1884	—
1900.....	1894	6	1896	3
1910.....	1909	13	1904	2
1920.....	1920	18	1916	2
1930.....	1928	55	1924	20
1940.....	1938	109	1937	30
1950.....	1949	266	1942	83
1960.....	1954	233	1958	176
1970.....	1970	426	1964	230

(a) Includes nullities of marriage and judicial separations.

The following table gives the number of petitions filed by husbands and wives respectively, and the number of dissolutions of marriage during the recent years. Every decree of dissolution of marriage is now, in the first instance, a decree *nisi* and is normally made absolute after a period of one month. Previously the period was three months.

Petitions Filed and Dissolutions Granted

Particulars	1971	1972	1973	1974	1975	1976(a)
Petitions for dissolution (b) filed by—						
Husband.....	221	237	281	309	287	n.a.
Wife.....	267	288	354	444	444	n.a.
Total petitions.....	488	525	635	753	731	2 180
Dissolutions (b) granted on petition of—						
Husband.....	198	200	186	240	242	675
Wife.....	234	246	258	296	349	1 085
Total dissolutions.....	432	446	444	536	591	1 760

(a) The Family Law Court came into operation in 1976.

(b) Includes nullities of marriage and judicial separations: two nullities were granted in 1976.

The following three tables dissect dissolutions of marriage granted during 1976 by ages of parties at the time of marriage, by ages of parties at the time of dissolution and by the duration and issue of marriage:

Dissolutions of Marriage 1976 (a): Ages of Parties at Time of Marriage

Age of husband (years)	Age of wife (years)							Total husbands
	Under 20	20-29	30-39	40-49	50-59	60 and over	Not stated	
Under 20.....	241	53	—	—	—	1	1	296
20-29.....	560	664	17	1	—	—	2	1 244
30-39.....	22	93	30	11	—	—	—	156
40-49.....	2	6	18	15	1	—	1	43
50-59.....	—	2	3	6	3	—	—	14
60 and over.....	—	—	—	—	2	1	—	3
Not stated.....	1	2	—	—	—	—	1	4
Total wives.....	826	820	68	33	6	2	5	1 760

(a) Includes nullities of marriage and judicial separations.

Dissolutions of Marriage 1976 (a): Ages of Parties at Time of Dissolution

Age of husband (years)	Age of wife (years)							Total husbands
	Under 20	20-29	30-39	40-49	50-59	60 and over	Not stated	
Under 20	—	1	—	—	—	1	—	2
20-29	7	516	22	1	—	—	—	546
30-39	1	188	352	13	—	—	1	555
40-49	—	9	139	201	19	—	1	369
50-59	—	1	12	87	101	11	2	214
60 and over	—	—	2	7	25	35	—	69
Not stated	—	1	1	—	1	1	1	5
Total wives	8	716	528	309	146	48	5	1 760

(a) Includes nullities of marriage and judicial separations.

Dissolutions of Marriage, 1976 (a): Duration of Marriage and Issue

Duration of marriage (years)	Dissolutions of marriages with—						Total marriages dissolved	Total number of children (b)
	No children	1 child	2 children	3 children	4 children	5 or more children		
0- 4	168	96	19	6	1	—	290	156
5- 9	132	174	165	46	7	1	525	675
10-14	21	49	108	73	30	12	293	669
15-19	21	23	64	76	37	28	249	679
20-24	43	49	31	28	10	13	174	309
25-29	70	33	11	6	3	5	128	117
30 and over	86	11	3	1	—	—	101	20
Total	541	435	401	236	88	59	1 760	2 625

(a) Includes nullities of marriage and judicial separations.

(b) Under 21 years of age.

Births

The following table summarises births and crude birth rates from 1880:

Number of Births and Crude Birth Rates, Selected years from 1880

Year	Births		Year	Births	
	Number	Per 1 000 of mean population		Number	Per 1 000 of mean population
1880	3 739	32.90	1950	7 242	25.96
1890	4 813	33.60	1960	8 853	25.52
1900	4 864	28.18	1970	8 185	21.09
1910	5 586	29.25	1974	7 398	r 18.51
1920	5 740	27.29	1975	6 982	r 17.26
1930	4 785	21.66	1976	6 702	r 16.45
1940	4 994	20.71	1977	6 735	16.40

The next table shows the number of births classified according to the age of mother for recent years:

Number of Births Classified According to Age of Mother

Age group (years)	1973	1974	1975	1976	1977	
					Number	Per cent
10-14.....	7	7	7	8	11	0.2
15-19.....	1 101	1 056	992	854	873	13.0
20-24.....	2 677	2 699	2 605	2 545	2 395	35.5
25-29.....	2 322	2 433	2 278	2 202	2 359	35.0
30-34.....	836	852	777	801	869	12.9
35-39.....	291	278	261	223	184	2.7
40-44.....	87	69	59	65	40	0.6
45 and over.....	5	4	3	4	4	0.1
Total births.....	7 326	7 398	6 982	6 702	6 735	100.0

One observation of interest is that births of males, in total, usually exceed those of females. The next table shows births by sex and indicates masculinity:

Births by Sex and Masculinity

Particulars	1973	1974	1975	1976	1977
Births of—					
Males.....	3 744	3 760	3 605	3 464	3 463
Females.....	3 582	3 638	3 377	3 238	3 272
Total.....	7 326	7 398	6 982	6 702	6 735
Masculinity (a).....	104.52	103.35	106.78	106.98	105.84

(a) Number of male births per 100 female births.

In the following table, births are analysed by sex and by the age of the mother and classified as nuptial or ex-nuptial.

Births by Sex, Age of Mother and Nuptial State, 1977

Age group (years)	Nuptial births		Ex-nuptial births		All births		
	Male	Female	Male	Female	Male	Female	Total
10-14.....	—	1	8	2	8	3	11
15-19.....	255	246	199	173	454	419	873
20-24.....	1 111	1 061	120	103	1 231	1 164	2 395
25-29.....	1 122	1 114	71	52	1 193	1 166	2 359
30-34.....	440	390	21	18	461	408	869
35-39.....	84	89	9	2	93	91	184
40-44.....	18	17	3	2	21	19	40
45 and over.....	2	2	—	—	2	2	4
Total.....	3 032	2 920	431	352	3 463	3 272	6 735

The table that follows summarises, for a five-year period, births according to whether the child was first-born or the issue of a subsequent birth:

Births by Nuptial State of Mother and First Born or Subsequent Issue

Particulars	1973	1974	1975	1976	1977
Nuptial—					
First born (a).....	2 358	2 456	2 349	2 263	2 317
Subsequent birth.....	4 225	4 154	3 875	3 733	3 635
Ex-nuptial.....	743	788	758	706	783
Total births.....	7 326	7 398	6 982	6 702	6 735
Ex-nuptial births as percentage of total births.....	10.1	10.7	10.9	10.5	11.6

(a) In case of multiple births with no previous issue, first child born alive is recorded as 'First born' and subsequent child or children as 'Subsequent birth'.

It should be noted that 'First born' in previous tables refers specifically to the union from which the child originates; thus a mother married for the second time could be credited with a 'First born' child despite having issue from the previous union.

Birth Rates

The *crude birth rate* is expressed as the number of births per 1 000 of mean population; this is obviously an unsatisfactory measure since births are events strictly related to the number of women in the fertile age groups. A more satisfactory index is the *fertility rate*, expressed as the number of births per 1 000 women aged 15-44 years. However, there are profound differences between the relative fertility of various age groups and a further refinement is the calculation of *age-specific birth rates*. The following table shows age-specific birth rates for each five-year age group of females from 10-49 years, the fertility rate applicable to all women in the age group 15-44 years and the crude birth rate.

Birth and Fertility Rates

Particulars	1973	1974	1975	1976 r	1977
Age Specific Birth Rates (a)					
Age group (years)—					
10-14	0.3	0.3	0.3	0.4	0.6
15-19	58.6	54.6	50.0	44.0	45.0
20-24	166.9	165.6	153.4	153.0	144.0
25-29	162.8	163.1	147.1	136.5	146.2
30-34	71.4	70.7	61.8	61.2	66.4
35-39	27.6	26.3	23.9	19.5	16.1
40-44	8.2	6.5	5.8	6.4	4.0
45-49	0.5	0.3	0.3	0.4	0.4
Fertility Rate (b)					
Fertility rate	90	88	81	77	78
Crude Birth Rate (c)					
Crude birth rate	18.5	18.5	17.3	16.4	16.4

(a) Number of births per 1 000 women in age groups shown.

(b) Number of births per 1 000 women aged 15-44 years.

(c) Number of births per 1 000 of mean population.

Total Fertility, and Gross and Net Reproduction Rates

Total fertility for a population is obtained either by summing single age-specific birth rates for a year and dividing by 1 000 or by summing five-year age-specific birth rates, multiplying by five and dividing by 1 000. The result represents the hypothetical number of children a woman would bear throughout her child bearing years if she experienced the age-specific birth rates for that particular year during her lifetime.

The *gross reproduction rate* is derived from *total fertility* and the ratio of female to total births. It indicates the number of female children who would be born on average to women, supposing the rates from which it was calculated were to apply throughout the reproductive period. It is an indication of the extent to which the population is reproducing itself except that it does not allow for females who failed to survive to the end of their childbearing period. The *net reproduction rate* allows for such mortality. It is obtained by multiplying the age-specific rates by the survivor proportions in the corresponding age group of the stationary or life table population. Mortality in childhood and young adulthood is now so low that there is little difference between current gross and net reproduction rates.

A net reproduction rate of one indicates that the reproduction pattern for the particular year is such as to replace the current generation of mothers by an equivalent number of daughters, if continued.

The next table gives total fertility rates and gross and net reproduction rates for Tasmania for recent years. The calculations have been based on population age distribution estimates

made prior to the availability of 1976 Population Census results and the statistics shown are therefore subject to revision.

Total Fertility, and Gross and Net Reproduction Rates *p*

Year	Total fertility	Gross reproduction rate	Net reproduction rate
1970.....	2.962	1.430	1.389
1971.....	2.967	1.465	1.423
1972.....	2.755	1.371	1.332
1973.....	2.493	1.218	1.184
1974.....	2.437	1.201	1.167
1975.....	2.213	1.073	1.043
1976.....	2.143	1.035	1.005

Infant Mortality

Infant mortality relates to children dying within one year of birth. The table that follows analyses such deaths in further detail and shows that the greatest mortality rate is associated with infants in their first day of life. To obtain a correct picture of relative risk, it should be noted that deaths in the 'one day and under one week' class are spread over six days; in the 'one week and under four weeks' class spread over 21 days; and in the final class, spread over 338 days.

Infant Mortality: Number of Deaths and Mortality Rates at Specific Ages

Year	Infant deaths		Mortality rate (a) at age specified			
	Number	Per 1 000 live births	Under 1 day	1 day and under 1 week	1 week and under 4 weeks	4 weeks and under 12 months
1972.....	127	16.2	4.7	2.3	2.2	7.0
1973.....	137	18.7	6.4	3.8	1.1	7.4
1974.....	123	16.6	5.3	3.9	0.9	6.5
1975.....	128	18.3	4.6	5.2	1.4	7.2
1976.....	77	11.5	2.5	3.1	0.7	5.1
1977.....	99	14.7	3.1	3.3	0.7	7.6

(a) Infant deaths per 1 000 live births.

Causes of Infant Deaths

The following table has been compiled on the basis of the Eighth Revision (1965) of the International Classification of Diseases (World Health Organisation).

Infant Mortality: Causes of Death Under One Year

Cause	1974	1975	1976	1977
009 Diarrhoeal diseases.....	1	2	—	2
036 Meningococcal infection.....	—	1	2	—
000-008 } Other general diseases (a).....	3	6	—	3
010-035 } 037-315 }				
320 Meningitis.....	—	—	—	1
321-389 Other diseases of the nervous system and sense organs.....	—	1	—	2
390-458 Diseases of the circulatory system.....	2	1	—	—
460-466 Acute respiratory infection (except influenza).....	2	—	1	1
470-474 Influenza.....	—	—	—	—
480-486 Pneumonia.....	5	12	5	4
490-493 Bronchitis, emphysema and asthma.....	—	—	—	—
500-519 Other diseases of respiratory system.....	1	—	—	—
520-577 Diseases of the digestive system.....	1	1	1	—

Infant Mortality: Causes of Death Under One Year—continued

Cause	1974	1975	1976	1977
580-629 Diseases of genito-urinary system	—	1	—	—
680-709 Diseases of skin and subcutaneous tissue	—	—	—	—
710-738 Diseases of musculoskeletal system and connective tissue	—	—	1	—
740-759 Congenital anomalies	18	22	8	16
760-763 Certain maternal conditions	5	8	1	1
764-768 } Birth injury, difficult labour and other anoxic and hypoxic 772,776 } conditions	21	16	18	18
769-771 } 773-775 } Other causes of perinatal mortality	30	30	14	12
777-779 } 780-796 } Symptoms and ill-defined conditions (b)	33	26	25	37
800-999 Accidents, poisonings and violence	1	1	1	2
Total	123	128	77	99

(a) Principally infective and parasitic diseases.

(b) Includes sudden death in infancy syndrome; 33 in 1974, 26 in 1975, 24 in 1976 and 37 in 1977.

Deaths

The following table summarises the number of deaths and crude death rates from 1880 to 1976:

Number of Deaths and Crude Death Rates, Selected Years from 1880

Year	Deaths		Year	Deaths	
	Number	Rate (a)		Number	Rate (a)
1880	1 832	16.12	1940	2 387	9.90
1890	2 118	14.79	1950	2 466	8.85
1900	1 903	11.02	1960	2 670	(b) 7.70
1910	2 120	11.10	1970	3 174	8.18
1920	2 036	9.68	1976	3 389	8.32
1930	1 948	8.82	1977	3 269	7.96

(a) Per 1 000 of mean population.

(b) Lowest on record.

A marked difference exists between male and female crude death rates:

Male and Female Deaths and Crude Rates

Year	Number of deaths			Deaths per 1 000 of mean population			Ratio of male to female crude death rates
	Males	Females	Persons	Males	Females	Persons	
1965	1 716	1 327	3 043	9.24	7.29	8.27	1.267
1970	1 785	1 389	3 174	r 9.13	r 7.21	r 8.18	r 1.266
1973	1 894	1 453	3 347	r 9.53	r 7.38	r 8.46	r 1.291
1974	1 954	1 530	3 484	r 9.75	r 7.68	r 8.72	r 1.270
1975	1 849	1 490	3 339	r 9.12	7.38	r 8.26	r 1.236
1976	1 850	1 539	3 389	r 9.06	r 7.57	8.32	r 1.197
1977	1 865	1 404	3 269	9.07	6.85	7.96	1.324

Death Rates for Specific Age Groups

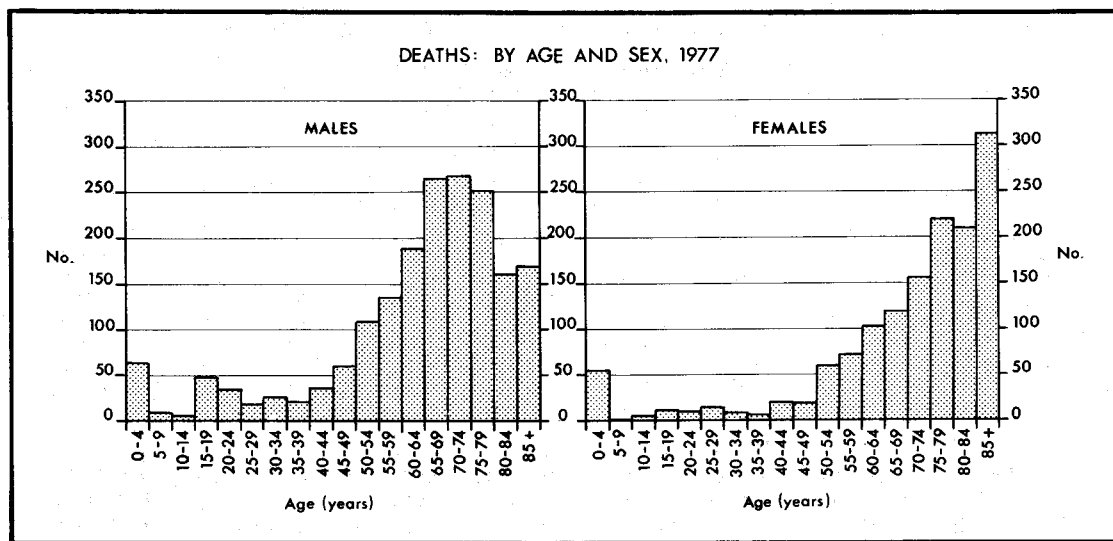
Previously in this chapter, crude death rates were described as unsuitable for comparisons over long periods of time due to changes in the age structure of the community. In the following table, this difficulty is overcome by calculating death rates for specific age groups. The method employed is to obtain the average annual deaths for specific age groups over those three-year periods which are broken into equal parts by a census of population

(e.g. 30 June 1947 is the census date for a calculation of rates in the three years, 1946-1948 inclusive). Rates can then be calculated by comparing the average number of deaths for each group with the number of persons in each group as revealed by the census. In theory, the calculation of such rates need not be restricted to periods for which a census date forms the midpoint but the advantage of accepting such restriction lies in the accuracy of the age distribution obtained from the census. In the table, three-year periods have been selected appropriate to the censuses of 1947, 1971 and 1976 (the data relate to the Tasmanian population):

Death Rates for Specific Age Groups (a)

Age group (years)	Males			Females			Persons		
	1946-48	1970-72	1975-77	1946-48	1970-72	1975-77	1946-48	1970-72	1975-77
0-4	9.13	4.46	3.68	7.24	2.93	3.01	8.21	3.71	3.35
5-9	1.15	0.47	0.49	0.69	0.36	0.27	0.92	0.42	0.39
10-14	0.67	0.56	0.42	0.39	0.30	0.31	0.53	0.43	0.36
15-19	1.62	2.42	2.18	1.46	0.60	0.57	1.54	1.53	1.39
20-24	2.10	2.10	2.03	1.79	0.53	0.30	1.94	1.32	1.17
25-29	2.12	1.87	1.13	1.74	0.83	0.66	1.93	1.37	0.90
30-34	2.27	1.84	1.45	1.90	0.79	0.79	2.09	1.33	1.13
35-39	3.10	2.10	1.94	2.59	1.34	1.25	2.85	1.73	1.60
40-44	3.93	3.43	3.26	3.51	1.89	2.05	3.73	2.69	2.67
45-49	5.88	5.36	6.00	4.66	3.10	3.57	5.28	4.25	4.83
50-54	9.52	9.65	9.21	7.84	5.79	5.36	8.65	7.74	7.29
55-59	16.98	15.77	14.68	10.03	8.26	9.26	13.44	12.06	11.97
60-64	23.87	25.71	23.64	17.30	12.82	8.97	20.53	19.19	16.18
65-69	41.82	41.10	38.01	27.35	22.40	18.68	34.56	31.51	28.10
70-74	58.43	64.05	61.75	49.47	37.51	34.22	53.80	48.92	46.52
75-79	103.22	94.96	94.52	77.00	62.46	54.53	89.78	74.91	70.52
80-84	156.64	140.11	139.12	123.49	99.45	90.67	138.41	114.30	106.39
85 and over	292.36	220.56	231.82	220.32	204.67	190.16	250.16	210.54	202.98

(a) Rate per 1 000 of the population in the specified age group at census date.



Causes of Death

The next table shows causes of death, the rates per 100 000 of mean population and the proportion of deaths from each cause based on the Eighth (1965) Revision of the International Classification of Diseases (adopted for use in 1968).

In 1977, diseases of the heart (items 25 to 29) accounted for 35.6 per cent of all deaths (1 163 deaths out of the total of 3 269). The comparable figures for 1976 were 1 225 deaths (36.1 per cent) out of the total of 3 389 deaths. Other major causes of death in 1977 (with 1976 figures in brackets) were: cancer, all forms (item 19), 622 (618); cerebrovascular disease, 370 (424); motor vehicle accidents, 131 (108); and all other accidents, 90 (106).

Causes of Death: Numbers and Rates, 1977

Cause of death	International classification	Number of deaths	Rate per 100 000 of mean population	Percentage of total deaths
0-4. (a)	(a)	3	1	0.1
5. Tuberculosis of respiratory system	010-012	2	—	0.1
6. Other tuberculosis including late effects	013-019	2	—	0.1
7-16. (b)	(b)	2	—	0.1
17. Syphilis and its sequelae	090-097	—	—	—
18. All other infective and parasitic diseases	(c)	8	2	0.2
19. Malignant neoplasms—				
Digestive organs and peritoneum	150-159	210	51	6.4
Trachea, bronchus and lung	162	120	29	3.7
Breast	174	41	10	1.3
Genito-urinary organs	180-189	103	25	3.1
Leukaemia	204-207	25	6	0.8
Other malignant and lymphatic neoplasms	(d)	123	30	3.8
20. Benign and unspecified neoplasms	210-239	2	—	0.1
21. Diabetes mellitus	250	47	11	1.4
22. Nutritional deficiencies	260-269	—	—	—
23. Anaemias	280-285	7	2	0.2
24. Meningitis	320	2	—	0.1
25. Active rheumatic fever	390-392	2	—	0.1
26. Chronic rheumatic heart disease	393-398	26	6	0.8
27. Hypertensive disease	400-404	38	9	1.2
28. Ischaemic heart disease	410-414	940	229	28.7
29. Other forms of heart disease	420-429	157	38	4.8
30. Cerebrovascular disease	430-438	370	90	11.3
31. Influenza	470-474	1	—	—
32. Pneumonia	480-486	144	35	4.4
33. Bronchitis, emphysema and asthma	490-493	162	39	5.0
34. Peptic ulcer	531-533	22	5	0.7
35. Appendicitis	540-543	1	—	—
36. Intestinal obstruction and hernia	550-553	3	1	0.1
37. Cirrhosis of liver	560	9	2	0.3
38. Nephritis and nephrosis	571	35	9	1.1
39. Hyperplasia of prostate	580-584	33	8	1.0
40. Abortion	600	6	1	0.2
41. {Other complications of pregnancy, childbirth and the puerperium. Delivery without mention of complication	640-645	—	—	—
42. Congenital anomalies	650-678	—	—	—
43. {Birth injury, difficult labour and other anoxic and hypoxic conditions	740-759	21	5	0.6
	764-768	1	—	—
	772-776	18	4	0.6
44. Other causes of perinatal mortality	760-763	1	—	—
	769-771	5	1	0.2
	773-775	—	—	—
	777-779	6	1	0.2
	780-796	52	13	1.6
45. Symptoms and other ill-defined conditions	Remainder of 240-738	251	61	7.7
46. All other diseases	810-823	131	32	4.0
47. Motor vehicle accidents	800-807	2	—	0.1
48. All other accidents	825-949	88	21	2.7
49. Suicide and self-inflicted injuries	950-959	42	10	1.3
50. All other external causes	960-999	5	1	0.2
All causes		3 269	796	100.0

(a) 000-009. (See following text for specification of diseases.)

(b) 020, 032, 033, 034, 036, 040-043, 050, 055, 080-084. (See following text for specification of diseases.)

(c) 021-027, 030, 031, 035, 037, 038, 039, 044-046, 051-054, 056, 057, 060-068, 070-079, 085-089, 098-117, 120-136.

(d) 140-149, 160, 161, 163, 170-173, 190-203, 208, 209.

It will be noted that items 0-4 and 7-16 in the table were not listed individually, few associated deaths having been recorded. The specification of causes reads: (1) cholera; (2) typhoid fever; (3) dysentery, all forms; (4) enteritis and other diarrhoeal diseases; (7) plague; (8) diphtheria; (9) whooping cough; (10) streptococcal sore throat and scarlet fever; (11) meningococcal infection; (12) acute poliomyelitis; (13) smallpox; (14) measles; (15) typhus and other rickettsial diseases; and (16) malaria. Uncertainty as to diagnosis in earlier periods makes comparison difficult but, at the turn of the century, whooping cough, diphtheria, typhoid fever and scarlet fever were diseases associated with numerous deaths.

Causes of Death in Age Groups

The previous tables showing causes of death make no reference to age, a complete dissection by age and cause being beyond the scope of a *Year Book*. Nevertheless, there is an extremely significant relationship between age and cause of death and the next table indicates, in summary form, their close inter-connection. For each of the specified causes in the next table, two percentages are shown: (i) deaths in a particular age group as a proportion of total deaths from all causes in that age group; and (ii) deaths in a particular age group as a proportion of total deaths from the same causes at all ages. The causes chosen and specified are such that they account, in total, for approximately 75 per cent or more of deaths in most of the given age groups.

Attention is called to 'Accidental and violent deaths' (800-999) which account for over 60 per cent of deaths in the age from 1 to 34 years inclusive. Also noteworthy is the present relative unimportance of 'Infective and parasitic diseases' (001-136). The most important group, in a total sense, is 'Diseases of the heart' (390-398, 400-404, 410-429) followed by 'Cancer (all forms)' (140-209); then 'Cerebrovascular diseases' (430-438); and 'Diseases of the respiratory system' (460-519). Nevertheless, the inter-connection between age and cause of death is so close that none of these causes needs to be specified for some age groups in the table.

Principal Causes of Death in Age Groups, 1977

Age group in years	Inter- national classifi- cation	Cause of death	Deaths from specified causes in age groups		
			Number	Proportion of deaths	
				In age group (per cent)	At all ages (per cent)
Under 1	795	Sudden death in infancy	37	37.4	97.4
	776	Anoxic and hypoxic conditions	17	17.2	100.0
	740-759	Congenital anomalies	16	16.2	76.2
	460-519	Diseases of respiratory system	5	5.1	1.6
	777	Immaturity unqualified	3	3.0	100.0
	—	Other causes	21	21.2	—
		All causes	99	100.0	3.0
1-4	800-999	Accidents and violence	6	35.3	2.2
	140-209	Cancer (all forms) (a)	2	11.8	0.3
	740-759	Congenital anomalies	2	11.8	9.5
	—	Other causes	7	41.2	—
		All causes	17	100.0	0.5
5-14	800-999	Accidents and violence	11	50.0	4.1
	140-209	Cancer (all forms) (a)	2	9.1	0.3
	460-519	Diseases of respiratory system	3	13.6	0.9
	—	Other causes	6	27.3	—
		All causes	22	100.0	0.7
15-19	800-999	Accidents and violence	53	88.3	19.8
	140-209	Cancer (all forms) (a)	—	—	—
	—	Other causes	7	11.7	—
		All causes	60	100.0	1.8

Principal Causes of Death in Age Groups, 1977—continued

Age group in years	Inter- national classifi- cation	Cause of death	Deaths from specified causes in age groups		
			Number	Proportion of deaths	
				In age group (per cent)	At all ages (per cent)
20-24	800-999 —	Accidents and violence	33	78.6	12.3
		Other causes	9	21.4	—
		All causes	42	100.0	1.3
25-34	800-999 390-398 400-404 410-429 140-209 —	Accidents and violence	32	47.8	11.9
		Diseases of heart	4	6.0	0.3
		Cancer (all forms) (a)	9	13.4	1.4
		Other causes	22	32.8	—
		All causes	67	100.0	2.0
35-44	800-999 140-209 390-398 400-404 410-429 430-438 460-519 —	Accidents and violence	20	24.4	7.5
		Cancer (all forms) (a)	14	17.1	2.3
		Diseases of heart	22	26.8	1.9
		Cerebrovascular diseases	4	4.9	1.1
		Diseases of respiratory system	5	6.1	1.6
		Other causes	17	20.7	—
		All causes	82	100.0	2.5
45-54	390-398 400-404 410-429 140-209 800-999 460-519 430-438 —	Diseases of heart	94	37.9	8.1
		Cancer (all forms) (a)	62	25.0	10.0
		Accidents and violence	32	12.9	11.9
		Diseases of respiratory system	21	8.5	6.6
		Cerebrovascular diseases	11	4.4	3.0
		Other causes	28	11.3	—
		All causes	248	100.0	7.6
55-64	390-398 400-404 410-429 140-209 430-438 460-519 800-999 440-448 —	Diseases of heart	193	39.0	16.6
		Cancer (all forms) (a)	136	27.5	21.9
		Cerebrovascular diseases	38	7.7	10.3
		Diseases of respiratory system	39	7.9	12.3
		Accidents and violence	19	3.8	7.1
		Diseases of arteries	9	1.8	10.2
		Other causes	61	12.3	—
		All causes	495	100.0	15.1
65-74	390-398 400-404 410-429 140-209 430-438 460-519 440-448 250 —	Diseases of heart	308	38.2	26.5
		Cancer (all forms) (a)	202	25.1	32.5
		Cerebrovascular diseases	102	12.7	27.6
		Diseases of respiratory system	81	10.0	25.5
		Diseases of arteries	19	2.4	21.6
		Diabetes	12	1.5	25.5
		Other causes	82	10.2	—
		All causes	806	100.0	24.7

Principal Causes of Death in Age Groups, 1977—continued

Age group in years	International classification	Cause of death	Deaths from specified causes in age groups		
			Number	Proportion of deaths	
				In age group (per cent)	At all ages (per cent)
75 and over.....	390-398 400-404 410-429 430-438 460-519 140-209 440-448 250 —	Diseases of heart..... Cerebrovascular diseases..... Diseases of respiratory system..... Cancer (all forms) (a)..... Diseases of arteries..... Diabetes..... Other causes.....	538 208 154 189 59 27 156	40.4 15.6 11.6 14.2 4.4 2.0 11.7	46.3 56.2 48.4 30.4 67.0 57.4 —
		All causes.....	1 331	100.0	40.7

(a) Includes Hodgkin's disease and the leukaemias.

Heart Diseases

As the previous two tables indicate, heart diseases (list items 390-398, 400-404, 410-429) are the greatest single cause of death. In the following record of deaths due to heart diseases, 1950 has been chosen as a starting point since earlier figures are not strictly comparable.

Deaths from Heart Diseases (All Causes) (a)

Year	Number of deaths			Death rate per 100 000 of mean population	Deaths as a percentage of deaths from all causes
	Males	Females	Persons		
1950.....	413	304	717	257	29.1
1970.....	681	454	1 135	292	35.8
1973.....	r 699	r 460	r 1 159	r 293	34.6
1974.....	r 660	r 504	1 164	r 291	33.4
1975.....	673	526	1 199	r 296	35.9
1976.....	710	515	1 225	r 301	36.1
1977.....	666	497	1 163	283	35.6

(a) List items 400-416, 420-443 in 1950; 390-398, 400-404, 410-429 from 1968.

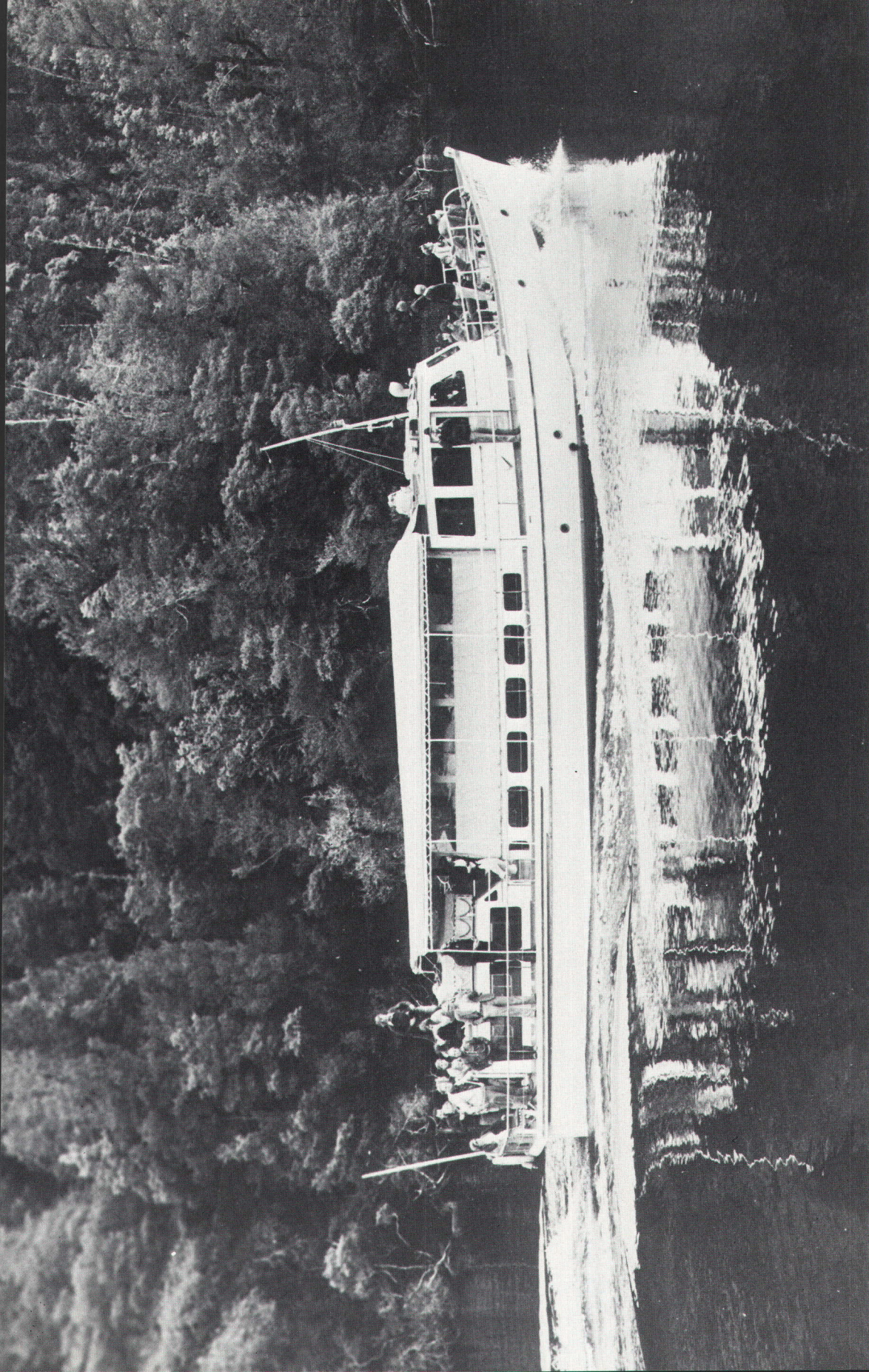
Malignant Neoplasms

In the next table, deaths from 'Malignant neoplasms including Hodgkin's disease and the leukaemias' (cancer, all forms) are summarised:

Deaths from all Types of Malignant Neoplasms (a)

Year	Number of deaths			Death rate per 100 000 of mean population	Deaths as a percentage of deaths from all causes
	Males	Females	Persons		
1950.....	159	164	323	115	13.1
1970.....	253	229	482	124	15.2
1973.....	r 313	259	r 572	r 145	17.1
1974.....	339	r 275	r 614	r 154	r 17.6
1975.....	330	263	593	r 147	17.8
1976.....	328	290	618	152	18.2
1977.....	346	276	622	151	19.0

(a) List items 140-207 in 1950; 140-209 from 1968.

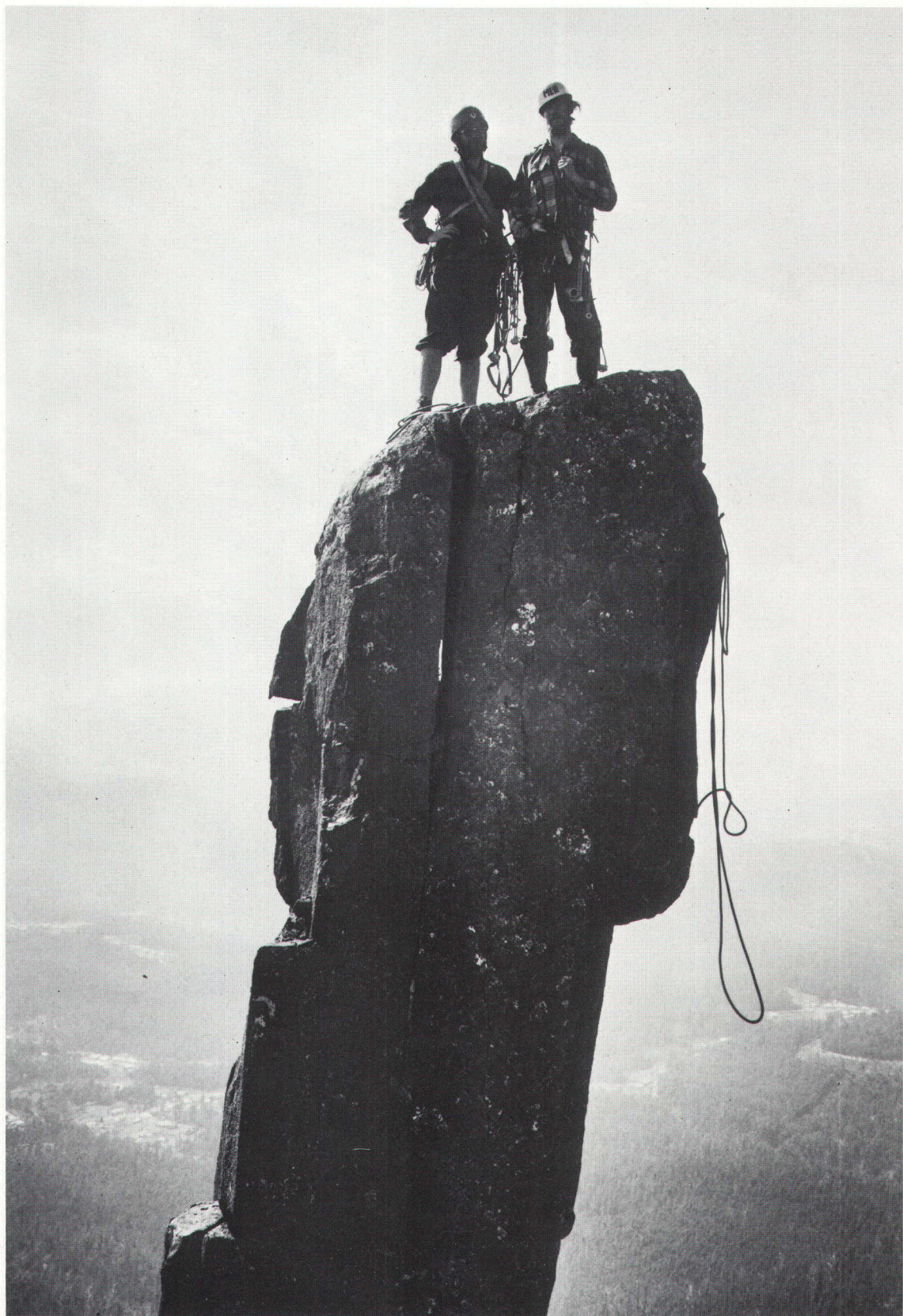


"J-Lee-M" on Gordon River

[D. Stephens and Associates]



"Hell's Gates", entrance to Macquarie Harbour



Rock Climbing at Mt. Wellington

[Tas. Film Corporation]



New Lake Pedder and Stillwater Bay

[Don Stephens and Associates]

Lung Cancer

Considerable interest has been shown in lung cancer recently because of its suspected connection with smoking habits. The following table shows deaths attributed to 'Malignant neoplasm of respiratory system' for recent years:

Deaths from Malignant Neoplasm of Respiratory System (a)

Year	Males	Females	Persons	Year	Males	Females	Persons
1950	20	4	24	1974	104	12	116
1960	40	3	43	1975	103	20	123
1970	72	19	91	1976	112	15	127
1973	75	8	83	1977	104	19	123

(a) List items 160-165 to 1967; 160-163 from 1968.

EXPECTATION OF LIFE AND LIFE TABLES

Previously, reference was made to the limitations of crude death rates as a measure of mortality. However, a correct measurement of the mortality of the population can be obtained from life tables.

A life table is, in effect, a mathematical model, its starting point being a hypothetical population (say 100 000) of newly-born males or females. Using data for a given period (e.g. single year age distribution of an actual population, deaths at single ages, etc.), the compiler calculates the theoretical number of survivors at each age in the hypothetical population until there are no survivors remaining.

Calculation of Life Expectancy

In the table that follows, l_x is the number of persons surviving at exact age x . From this survivors' table, other measures can then be computed, namely:

- L_x : the average number living between any year x and $x + 1$
- e°_x : the complete expectation of life (i.e. the average number of years lived after age x by each of a group of persons aged exactly x).

Not only does the l_x column give numbers of survivors at each age but, if accumulated, it gives an approximate measure of the total number of years lived by the life table population. To obtain a more refined measure of the total number of years lived, it is necessary to accumulate L_x values. These can be obtained by averaging each consecutive pair of l_x values.

Taking the male life table for 1970-72 as an example and using rounded figures:

- Total of all l_x values (for $x = 0, 1, \dots, 110$) = 6 831 000 years
- Total of all l_x values (for $x = 1, 2, \dots, 111$) = 6 731 000 years
- Therefore, total L_x values (for $x = 0, 1, \dots, 110$) = 6 781 000 years

According to the table, 100 000 males live a total of 6 781 000 years. It follows then, that the complete expectation of life (e°_0) can be taken as 67.81 years as from birth.

The above calculation shows the derivation of e°_x where x is 0. The same logic applies to other ages (apart from the highest ages):

Again taking the male life table as an example:

- Total of l_x values ($x = 10, 11, \dots, 110$) = 5 862 000 years
- Total of all l_x values ($x = 11, 12, \dots, 111$) = 5 765 000 years
- Therefore, total L_x values ($x = 10, 11, \dots, 110$) = 5 813 500 years

According to the table, 97 437 males live a total of a further 5 813 500 years. It follows then, that each male aged 10 has an average life expectancy of a further 59.66 years.

$$\left(\text{i.e. } \frac{5\,813\,500}{97\,437} \right)$$

From these examples, it will be seen that e°_x is simply an average or per capita figure, the two elements involved being the total number of years lived by a given population, and the given population itself.

For the sake of brevity, the following usual values have not been given in the table:

d_x the number of deaths in the year of age x to $x + 1$ among the l_x persons who enter on that year.

p_x the probability of a person aged x living a year.

q_x the probability of a person aged x dying within a year.

If required, these values can be computed from the tables as follows:

$$d_x = l_x - l_{x+1}$$

$$p_x = \frac{l_x}{l_{x+1}}$$

$$\text{and } q_x = 1 - p_x$$

The next table gives the number of survivors (l_x values) and complete expectation of life (e°_x values) for Australian males:

Australia: Life Tables, 1970-1972
Survivors (l_x) and Complete Expectation of Life (e°_x)
Males

Age x	l_x	e°_x	Age x	l_x	e°_x	Age x	l_x	e°_x
0	100 000	67.81	40	93 150	31.61	80	23 399	5.52
1	98 051	68.25	41	92 887	30.69	81	20 575	5.21
2	97 904	67.35	42	92 598	29.79	82	17 913	4.92
3	97 807	66.42	43	92 274	28.89	83	15 393	4.64
4	97 726	65.47	44	91 915	28.00	84	13 055	4.38
5	97 661	64.52	45	91 520	27.12	85	10 950	4.13
6	97 607	63.55	46	91 079	26.25	86	9 057	3.89
7	97 558	62.58	47	90 589	25.39	87	7 363	3.67
8	97 514	61.61	48	90 049	24.54	88	5 877	3.48
9	97 474	60.64	49	89 455	23.70	89	4 605	3.30
10	97 437	59.66	50	88 798	22.87	90	3 539	3.15
11	97 402	58.68	51	88 075	22.05	91	2 672	3.02
12	97 365	57.70	52	87 283	21.25	92	1 984	2.90
13	97 326	56.73	53	86 409	20.46	93	1 450	2.79
14	97 282	55.75	54	85 441	19.68	94	1 044	2.69
15	97 228	54.78	55	84 392	18.92	95	740	2.60
16	97 154	53.82	56	83 245	18.18	96	517	2.52
17	97 044	52.88	57	82 001	17.45	97	356	2.44
18	96 887	51.97	58	80 640	16.73	98	242	2.38
19	96 685	51.08	59	79 171	16.03	99	162	2.31
20	96 473	50.19	60	77 574	15.35	100	107	2.25
21	96 265	49.29	61	75 861	14.69	101	70	2.20
22	96 065	48.40	62	74 014	14.04	102	45	2.15
23	95 884	47.49	63	72 026	13.41	103	29	2.10
24	95 723	46.57	64	69 901	12.81	104	18	2.06
25	95 574	45.64	65	67 659	12.21	105	11	2.02
26	95 437	44.70	66	65 282	11.64	106	7	1.98
27	95 307	43.76	67	62 786	11.08	107	4	1.94
28	95 179	42.82	68	60 183	10.54	108	3	1.91
29	95 049	41.88	69	57 444	10.02	109	2	1.88
30	94 916	40.94	70	54 616	9.51	110	1	1.85
31	94 779	39.99	71	51 671	9.03			
32	94 639	39.05	72	48 626	8.56			
33	94 495	38.11	73	45 490	8.12			
34	94 346	37.17	74	42 285	7.69			
35	94 186	36.23	75	39 056	7.29			
36	94 010	35.30	76	35 801	6.90			
37	93 821	34.37	77	32 577	6.54			
38	93 618	33.44	78	29 414	6.19			
39	93 395	32.52	79	26 349	5.85			

The following table shows the l_x and e°_x values for Australian females:

Australia: Life Tables, 1970-1972
Survivors (l_x) and Complete Expectation of Life (e°_x)
Females

Age x	l_x	e°_x	Age x	l_x	e°_x	Age x	l_x	e°_x
0	100 000	74.49	40	95 848	37.16	80	44 242	6.68
1	98 499	74.74	41	95 671	36.22	81	40 588	6.45
2	98 369	73.83	42	95 477	35.30	82	36 855	6.06
3	98 294	72.89	43	95 263	34.37	83	33 106	5.69
4	98 240	71.93	44	95 026	33.46	84	29 358	5.35
5	98 193	70.97	45	94 771	32.55	85	25 746	5.03
6	98 153	69.99	46	94 488	31.64	86	22 270	4.74
7	98 116	69.02	47	94 176	30.75	87	19 024	4.46
8	98 084	68.04	48	93 835	29.86	88	16 030	4.20
9	98 056	67.06	49	93 462	28.97	89	13 315	3.96
10	98 030	66.08	50	93 057	28.10	90	10 888	3.73
11	98 007	65.10	51	92 615	27.23	91	8 753	3.52
12	97 984	64.11	52	92 138	26.37	92	6 921	3.33
13	97 960	63.13	53	91 625	25.51	93	5 378	3.14
14	97 931	62.14	54	91 073	24.66	94	4 103	2.97
15	97 897	61.17	55	90 484	23.82	95	3 070	2.81
16	97 857	60.19	56	89 843	22.99	96	2 250	2.65
17	97 802	59.22	57	89 150	22.16	97	1 615	2.51
18	97 734	58.27	58	88 401	21.35	98	1 133	2.37
19	97 664	57.31	59	87 595	20.54	99	776	2.25
20	97 596	56.35	60	86 719	19.74	100	519	2.13
21	97 532	55.38	61	85 774	18.95	101	338	2.02
22	97 472	54.42	62	84 753	18.17	102	214	1.91
23	97 414	53.45	63	83 652	17.41	103	132	1.82
24	97 356	52.48	64	82 462	16.65	104	79	1.72
25	97 296	51.51	65	81 187	15.90	105	46	1.64
26	97 236	50.54	66	79 813	15.17	106	26	1.56
27	97 175	49.58	67	78 310	14.45	107	14	1.48
28	97 112	48.61	68	76 688	13.75	108	7	1.41
29	97 046	47.64	69	74 909	13.06	109	4	1.35
30	96 975	46.67	70	72 983	12.39	110	2	1.28
31	96 899	45.71	71	70 885	11.74	111	1	1.23
32	96 819	44.75	72	68 607	11.12			
33	96 732	43.79	73	66 156	10.51			
34	96 637	42.83	74	63 510	9.93			
35	96 534	41.88	75	60 697	9.36			
36	96 422	40.92	76	57 700	8.82			
37	96 299	39.98	77	54 551	8.30			
38	96 162	39.03	78	51 258	7.80			
39	96 012	38.09	79	47 832	7.33			

The statistics in the above tables have been extracted from tables produced by the Commonwealth Actuary, the source data being supplied by the Australian Statistician and comprising: (i) the number of males and females living at each age last birthday, as shown by the 1971 Census; and (ii) the number of male and female deaths at each age (last birthday) in the years 1970, 1971 and 1972.

True Death Rates

From a life table, the total number of years lived by the original population of 100 000 can readily be calculated. In the case of the 1970-72 male life table, the total number of years lived was 6 781 000. It follows that the death rate of this population may be expressed as:

$$\frac{100\ 000}{6\ 781\ 000} \times \frac{1\ 000}{1} \text{ per } 1\ 000 \text{ years lived;}$$

i.e. 14.747 deaths per 1 000 years lived.

Life table experience can be regarded as the experience of a cross section of the population in a *single year* and the above calculation derives what is known as a 'true death rate' (the true death rate for the 1970-72 male population was 14.75 deaths per 1 000 persons per annum). The true death rate is thus the reciprocal of the complete expectation of life of a person at birth multiplied by 1 000.

The true death rate for a given period is unaffected by the particular age distribution of that period, and is determined solely by the mortality experience of the period as manifested in the rate of survival from each year of age to the next. The table below sets out complete expectation of life at birth and true death rates for the periods covered by the Australian life tables:

Australia: Complete Expectation of Life at Birth and True Death Rates

Period	Complete expectation of life at birth (years)		True death rate (a)	
	Males	Females	Males	Females
1881-1890	47.20	50.84	21.19	19.67
1891-1900	51.06	54.76	19.58	18.26
1901-1910	55.20	58.84	18.12	17.00
1920-1922	59.15	63.31	16.91	15.80
1932-1934	63.48	67.14	15.75	14.89
1946-1948	66.07	70.63	15.14	14.16
1953-1955	67.14	72.75	14.89	13.75
1960-1962	67.92	74.18	14.72	13.48
1965-1967	67.63	74.15	14.79	13.49
1970-1972	67.81	74.49	14.75	13.42

(a) Number of deaths per 1 000 in stationary (or life table) population in one year.

Further References

ABS Publications Produced by the Tasmanian Office

Census of Population and Housing, 30 June 1976, Preliminary Characteristics, Tasmania (2201.6) (released 24-5-77)

Demography, Tasmania (3101.6) (1976 issue released 18-10-77)

Population of Local Government Areas, Tasmania (3201.6) (annual, 30 June 1977 released 1-12-77)

Population and Vital Statistics, Tasmania (3202.6) (quarterly, March Qtr 1978 released 4-8-78)

Causes of Death Tasmania (3301.6) (annual, 1976 released 7-7-77)

ABS Publications Produced by the Canberra Office

Making Sense of the Census (1976 Census of Population and Housing Australia) (2129.0) (released 14-7-78)
 Characteristics of the Population: Local Government Areas (Preliminary, 1976 Census of Population and Housing) (2206.0) (released 1-9-78)

Populations and Dwellings in Local Government Areas and Urban Centres (Preliminary 1976 Census of Population and Housing) (2406.0) (released 15-11-77)

Projections of the Population of Australia (3204.0) (irregular, 1978 to 2011 released 18-7-78)

Population and Vital Statistics (Preliminary) (3211.0) (quarterly, March Qtr 1978 released 19-7-78)

Population and Vital Statistics (3212.0) (quarterly, December Qtr 1977 released 15-9-78)

Births (3301.0) (annual, 1976 released 5-5-78)

Deaths (3302.0) (annual, 1976 released 8-8-78)

Causes of Death (3303.0) (annual, 1976 released May 1978)

Perinatal Deaths (3304.0) (annual, 1976 released 31-5-78)

Australian Life Tables (3305.0) (irregular, 1970-72 released 26-10-76)

Marriages (3306.0) (annual, 1976 released 4-4-78)

Divorces (3307.0) (annual, 1975 released 27-1-77)

Social Indicators (4101.0) (annual, 1978 released May 1978)

Other Publications

Obstetric and Neonatal Report, Tasmania (produced annually by the State Committee of the Royal College of Obstetricians and Gynaecologists and the Department of Obstetrics and Gynaecology, University of Tasmania, 1976 issue released in June 1978).

BORRIE, W.D. (Chairman, National Population Inquiry) *Population and Australia, A Demographic Analysis and Projection*, Vols one and two, (Australian Government Publishing Service, Canberra, 1975)

Chapter 7

AGRICULTURE

THE AGRICULTURAL INDUSTRY

General

The Tasmanian rural economy is marked by great diversity and even allowing for the special regional adaptations made necessary by soil, climate, terrain and altitude, there are many agricultural holdings which individually exhibit an extremely varied range of activities.

Because of the importance of exports, agriculture in Tasmania has suffered generally as a result of adverse international currency movements and weak or protected overseas markets. Although livestock, wool and dairy products have been affected by these factors the pattern of farming in Tasmania has maintained the emphasis on rearing livestock for meat production with dairy products and wool also important. Apple growing, while still significant, has suffered from the inability of returns to cover costs and hop growing has encountered marketing problems. The growing of vegetables for processing is a significant activity and oil poppies have become an important crop in the last few years.

Historical

The 1976 and earlier editions of the *Year Book* include a summary of agricultural statistics available from as early as 1818.

Agricultural Industry Statistics

Sources of Information

The statistics are principally compiled from census returns of crop, pastoral and dairying production collected from agricultural holdings in Tasmania at 31 March each year. In conjunction with the general census, supplementary collections from farms are conducted where the harvesting of certain crops has not been completed by 31 March (e.g. apples, potatoes).

Additional information is also obtained from various marketing and other authorities and from a number of entirely separate collections covering such data as slaughterings and meat and dairy production.

Period Covered

Data relating to area sown, production and number of holdings growing crops are generally for the season ended 31 March. In cases where harvesting has not been completed by 31 March (e.g. potatoes), total production is nevertheless collected and included in published figures. Livestock numbers are also reported as at 31 March.

The census is conducted at 31 March (rather than 30 June) as it is considered to be the most appropriate date for all states to draw a line between the activities of two successive seasons.

The following tables give an indication of the seasonality of agricultural production in Tasmania. It should be noted that variations from the periods specified occur owing to variety of seed, district, seasonal conditions and scheduling of shearing.

Times of Planting and Harvesting Principal Crops, Tasmania

Crop	Time of planting	Harvesting period	Crop	Time of planting	Harvesting period
Cereals—			Fruit—		
Barley	Sept. to Nov.	Feb. to Mar.	Apples .....	..	Feb. to May
Oats	Mar. to Oct.	Nov. to Mar.	Apricots .....	..	Jan. to Feb.
Wheat	May to Sept.	Jan. to Feb.	Peaches .....	..	Jan. to Feb.
Vegetables—			Pears .....	..	Feb. to April
Beans, French and runner	Sept. to Oct.	Feb. to Mar.	Plums .....	..	Jan. to Feb.
Peas, green	Aug. to Oct.	Dec. to Feb.	Raspberries .....	..	Dec. to Jan.
Potatoes—			Currants .....	..	Jan. to Feb.
Early	June to Aug.	Dec. to Feb.	Gooseberries .....	..	Nov. to Dec.
Late	Sept. to Nov.	Feb. to Oct.	Strawberries .....	..	Nov. to Jan.
Tomatoes	Oct. to Nov.	Feb. to April			
Other crops—					
Hops .....	..	Feb. to April			
Field peas	July to Sept.	Jan. to April			

Main Shearing, Lambing and Slaughtering Periods, Tasmania

Activity	Period
Shearing (a)	September to December
Lambing—	
Spring	August to October
Autumn and winter	March to July
Slaughtering for export—	
Lambs (a)	November to March

(a) The period shown is that in which the seasonal activity is more pronounced.

Agricultural Holding—New Definition

Prior to 1975-76 an 'agricultural holding' was defined as 'a piece of land, one hectare or more in extent, used for the production of crops or for the raising of livestock and the production of livestock products'. Holdings of less than one hectare, on which commercial agricultural pursuits were carried out (e.g. nurseries, poultry farms, etc.) were also generally included.

It was recognised that many small holdings included under this definition were not engaged in agriculture on a 'commercial' scale and that the contribution such 'sub-commercial' holdings made to item totals was, in most cases, negligible.

With the creation of a new register of agricultural businesses in 1974-75 the opportunity was taken to streamline the Agricultural Census by redefining a rural holding as: 'an area of land (at one or more locations) where agricultural activity is undertaken and which is run by an enterprise with an estimated annual value of agricultural operations of \$1 500 or more'.

The estimated value of operations for 1976-77 was obtained for each holding by applying unit values to the commodity data reported on the 1977 Agricultural Census returns. The unit values used were averages for the previous three years to reduce the effects of short-term fluctuations in prices. In the case of crops, both area and production were valued, and for livestock, both animals sold during the year and numbers on the holding at 31 March were valued. This was done to reduce the effects of variations in average yields and to give due acknowledgement to any business that undertook agricultural operations but did not actually sell any agricultural commodities (due to factors such as crop failures or unfavourable market conditions).

The value of operations concept is merely a convenient way of objectively determining: (i) the relative scales of activity of agricultural holdings so as to exclude the small ones; and (ii) the industry classification of holdings. It is *not* a method of calculating actual gross income of holdings.

The total effect of the new definition was not felt in 1975-76 as a resistance factor had been introduced to prevent rural holdings which were 10 hectares or more in extent being

excluded from the tabulations. These holdings were excluded from the 1976-77 tabulations if their value of agricultural operations remained below \$1 500. The exclusion of these holdings accounted for a large percentage of the total decrease of approximately 2 000 (25 per cent) in the number of holdings in the 1976-77 tabulations from the previous year.

An analysis undertaken to investigate the possible effect of the new definition on census totals suggests that, except for cattle, pigs and a few minor crops, the effect on data is minimal.

Area of Crops

Total area of land sown or planted to crops is shown irrespective of whether the whole area was subsequently harvested or whether a portion or the whole of the crops failed and was not harvested. Where two successive crops are grown on the same land during the one season the land is included twice in the area of crops.

Value of Production

The statistics in the following sections refer mainly to areas sown to crops and quantities produced. The value of the various crops is shown under 'Value of Production' in Chapter 8. Financial statistics relating to agricultural enterprises are included towards the end of this chapter.

Classification of Agricultural Enterprises by Industry

Creation of the new register of agricultural businesses (enterprises) and the application of the Australian Standard Industrial Classification to the Agricultural Sector has enabled the production of a classification of agricultural enterprises by size and industry. The industry class of an agricultural enterprise is determined basically according to the predominant activity as measured after the application of unit values to commodity data.

The following table shows for 1976-77 all agricultural enterprises in Tasmania with an estimated value of operations of \$1 500 or more, classified according to industry class and estimated value of operations:

Agricultural Enterprises (a) Classified According to Industry Class and Estimated Value of Operations, 1976-77
(Number)

Industry class	Estimated value of operations (\$'000)						Total
	2 to 9	10 to 19	20 to 39	40 to 59	60 to 99	100 and over	
Sheep-meat cattle	269	140	112	38	40	26	625
Sheep	355	173	187	71	61	71	918
Meat cattle	734	111	41	7	4	2	899
Milk cattle	433	663	506	75	24	6	1 707
Pigs	94	36	43	9	8	5	195
Orchard and other fruit	155	95	108	42	40	22	462
Vegetables—potatoes	64	68	83	28	10	5	258
Vegetables—other	65	59	74	39	25	15	277
Other	166	86	93	32	28	22	427
Total	2 335	1 431	1 247	341	240	174	5 768

(a) An agricultural enterprise may comprise more than one agricultural holding. Column headings have been rounded to the nearest thousand dollars.

Size of Agricultural Holdings

A classification of agricultural holdings by size is carried out at irregular intervals. In the next table the size classifications have been converted directly from acres to hectares; hence the unusual class limits.

Classification of Rural Holdings by Size

Size of holdings (hectares)	Number of holdings			Area of holdings (⁰⁰⁰ hectares)		
	1928	1969	1977(a)	1928	1969	1977(a)
Under 20	3 164	2 241	425	23	19	4
20 and under 40	2 108	1 457	557	59	42	16
40 and under 202	4 779	4 624	3 320	443	427	326
202 and under 405	726	950	840	240	267	236
405 and under 2 023	775	888	805	647	754	674
2 023 and under 4 047	146	124	120	412	339	326
4 047 and under 8 094	67	68	58	374	372	320
8 094 and under 20 234	29	27	24	329	300	260
20 234 and over	5	5	5	155	146	146
Total	11 799	10 384	6 154	2 684	2 667	2 308

(a) Not comparable with previous years, see 'Agricultural Holding—New Definition', above.

Number of Holdings with Crops or Livestock

At 31 March 1977 there were 6 154 holdings which satisfied the new definition of an agricultural holding (see earlier this Chapter). The following table shows the number of holdings growing selected principal crops or carrying livestock; this gives some indication of farming activities on a broad basis only, since the same holding may be included more than once in the figures (in an extreme case, one holding could be included 11 times):

Number of Holdings Growing Principal Crops or Carrying Livestock

Particulars	1966-67	1973-74	1974-75	1975-76(a)	1976-77(a)
Number of agricultural holdings (at 31 March)	10 641	9 375	9 052	8 214	6 154
Holdings—					
Growing—					
Grain (b)—					
Barley	383	441	387	386	358
Oats	465	312	174	117	197
Wheat	194	91	39	47	53
Hops	106	76	50	28	26
Vegetables (c)—					
Potatoes	1 582	624	805	664	684
Onions	22	65	101	66	43
Fruit—					
Orchard tree (c)	1 260	612	486	425	398
Small fruit (c)	393	244	249	211	197

Number of Holdings Growing Principal Crops or Carrying Livestock—*continued*

Particulars	1966-67	1973-74	1974-75	1975-76 (a)	1976-77 (a)
Holdings (<i>continued</i>)—					
Carrying—					
Cattle	8 598	8 098	7 986	7 229	5 541
Sheep	5 224	3 784	3 844	3 579	3 062
Pigs	2 749	1 185	1 010	974	900

(a) Not comparable with previous years, see definition of 'Agricultural Holding', given earlier.

(b) Eight hectares and over up to 1973-74; 10 hectares and over from 1974-75. Corresponding figures for 1973-74 using the 10 hectare limit are: barley, 358; oats, 243; wheat, 70.

(c) 0.4 hectares and over up to 1971-72; 0.5 hectares and over from 1972-73.

It should be noted that a fall in the number of holdings engaged in a particular activity does not necessarily involved decreased total activity. Holdings carrying cattle have decreased over the last 10 years while cattle numbers have increased by 50 per cent in the same period. However, the decline in the number of holdings growing fruit has been matched by an actual fall in crop area and in total production.

Land Utilisation on Agricultural Holdings

Agricultural holdings at present occupy 33.8 per cent of Tasmania's area of 6 830 000 hectares; details of land utilisation follow:

Land Utilisation on Agricultural Holdings
(Hectares)

Type of usage	1966-67	1974-75	1975-76	1976-77
Crops (excluding sown pastures harvested) (a)	96 924	66 665	60 030	64 717
Sown pastures (b)	711 548	921 229	935 164	903 526
Balance (used mainly for grazing)	1 824 940	1 504 385	1 464 062	1 340 056
Total area of all holdings	2 633 412	2 492 279	2 459 256	2 308 299

(a) Excludes area of sown pasture harvested; includes orchards and small fruits.

(b) Includes area harvested. Lucerne is classified to sown pastures.

Definition of 'Crops'

'Crops' as specified in the previous table, refers only to cultivated fields and orcharding land. However, it is reasonable to regard as a crop the yield obtained from harvesting sown pastures. The next table shows the total area of crops, using this wider definition and taking account of double-cropping:

Total Area of Crops
(Hectares)

Area	1966-67	1974-75	1975-76	1976-77
Area used for crops (a)	96 924	66 665	60 030	64 717
Area double-cropped	3 598	1 883	2 076	2 532
Sown pastures harvested (b)	84 023	84 171	73 717	73 264
Total area of crops	184 545	152 719	135 823	140 513

(a) As shown in previous table.

(b) Includes lucerne.

Definition of 'Sown Pasture'

Sown pasture is pasture which has been developed by the sowing of non-indigenous grasses or legumes. The next table shows the total area of sown pasture and distinguishes between areas *cut* for various purposes and areas simply grazed:

**Sown Pasture: Classification of Total Area
(Hectares)**

Particulars	1966-67	1974-75	1975-76	1976-77
Pasture harvested—				
Hay	76 389	78 557	70 262	69 730
Seed	2 078	2 219	628	1 018
Green feed or silage	5 556	3 395	2 827	2 516
Total pastures harvested	84 023	84 171	73 717	73 264
Pastures not harvested	627 525	837 058	861 447	830 262
Total sown pasture	711 548	921 229	935 164	903 526

CROPS

The summary table below shows the area devoted to principal crop types. The table shows that the total area of pasture crops (harvested for hay, seed, green feed and silage) varies significantly from season to season.

**Area of Principal Crops: Summary
(Hectares)**

Crop	1966-67	1974-75	1975-76	1976-77
Section 1 (a)—				
Cereals for grain	28 222	19 629	17 045	20 019
Legumes mainly for grain	2 555	1 607	591	606
Crops for hay (b)	5 835	1 926	1 305	2 271
Crops for green feed or silage (c)	41 557	26 872	21 962	19 901
Fruit—Orchard tree	8 391	4 169	3 586	3 265
Berry and small	651	579	492	457
Vegetables for sale for human consumption	11 634	11 521	11 235	12 583
Hops	630	662	513	587
Oil poppies	(d)	1 146	4 240	6 117
Other crops	1 047	437	1 136	1 443
Total section 1 (e)	100 522	68 548	62 106	67 249
Section 2—				
Pasture harvested for hay, seed, green feed or silage (f)—				
Pasture hay	76 389	78 557	70 262	69 730
Pasture seed	2 078	2 219	628	1 018
Pasture harvested for green feed or silage	5 556	3 395	2 827	2 516
Total section 2	84 023	84 171	73 717	73 264
Total area of crops	184 545	152 719	135 823	140 513

(a) Section 1 excludes pastures harvested for hay, seed, green feed or silage; details for these are given in Section 2.

(b) Excludes pasture hay; see Section 2.

(c) Includes vegetables for stock feed but excludes pastures harvested for green feed or silage; see Section 2.

(d) Prior to 1970-71 oil poppies were included in 'Other crops'.

(e) Includes land double-cropped; in 1976-77 area involved was 2 532 hectares.

(f) Includes lucerne harvested.

Details of individual crops, their area, production and yield per hectare, are shown in the next table:

Crops: Area, Production and Yield per Hectare, 1976-77

Crop	Area (hectares)	Production		
		Unit of quantity	Total	Yield per hectare
Cereals for grain—				
Barley	11 644	tonnes	24 571	2.11
Oats	6 387	"	8 801	1.38
Rye	8	"	12	1.50
Wheat	1 980	"	3 929	1.98
Legumes mainly for grain—				
Beans—				
Navy (haricot)	122	tonnes	83	0.68
Horse	69	"	83	1.20
Field peas—				
Blue	81	"	139	1.72
Grey and other	334	"	626	1.87
Hay—				
Pasture (incl. lucerne)	69 730	tonnes	334 961	4.80
Oaten	2 000	"	8 694	4.35
Other	271	"	894	3.30
Orchard tree fruit—				
Bearing—				
Apples	2 741	tonnes	71 781	26.19
Apricots	57	"	256	45.19
Pears	114	"	1 434	12.58
Other	25	"	..	..
Non-bearing	327	"	..	..
Berry and small fruit—				
Bearing—				
Currants (black and red)	207	tonnes	575	2.77
Gooseberries	9	"	44	4.77
Loganberries	23	"	222	9.47
Raspberries	115	"	563	4.88
Strawberries	15	"	84	5.63
Non-bearing	87	"	..	..
Vegetables for human consumption—				
Beans, French and runner	1 277	tonnes	10 996	8.61
Peas, green (a)—				
For processing	6 363	"	31 632	4.97
Sold in pod	11	"	8	0.78
Potatoes	3 705	"	112 269	30.30
Turnips, swede and white	169	"	2 589	15.28
Other	1 058	"	..	..
Pasture seed (incl. lucerne)	1 018	kg	245 687	241.34
Other crops—				
Hops (b)	587	tonnes	1 330	2.27
Oil poppies	6 117	"	n.p.	n.p.

(a) Ex-shell weight.

(b) Production is expressed as dry weight.

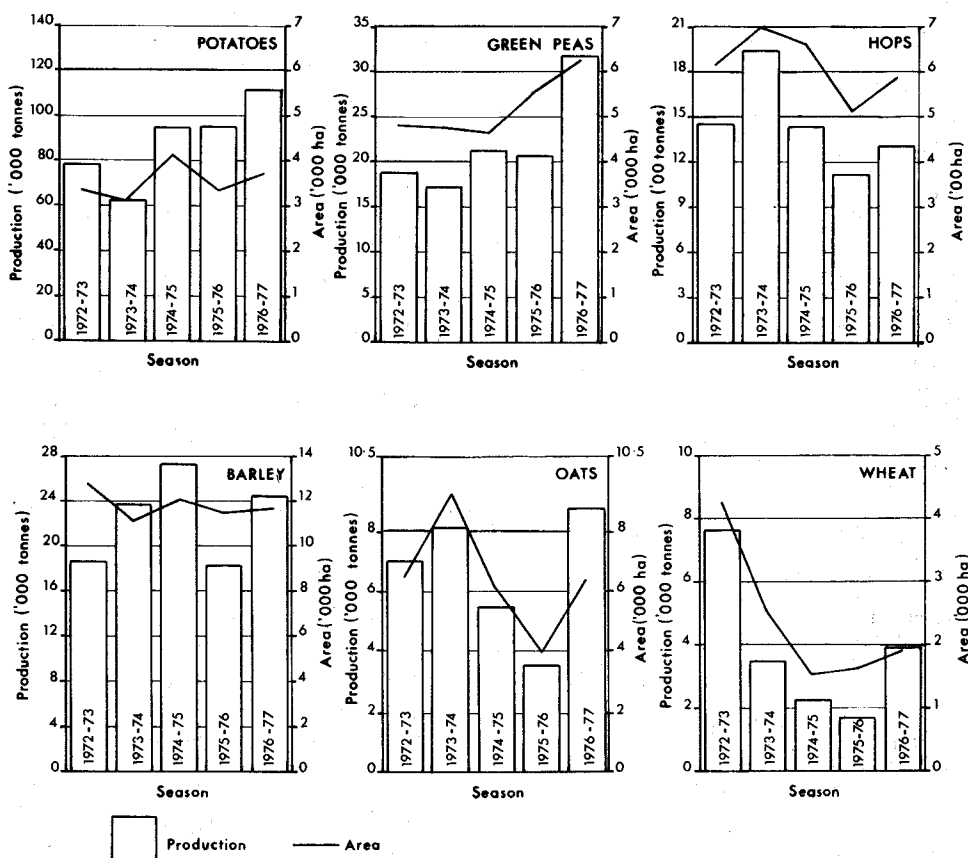
Principal Crops

The data on area and production of crops are compiled, in general, to give totals for each municipality. In subsequent parts of this chapter dealing with geographical distribution, the information is presented only in statistical divisions; however, the Hobart and Southern Division totals have been combined since the Hobart Division is basically a concept related to

a population which is predominantly urban in character. A description of the Tasmanian statistical divisions and sub-divisions appears in Chapter 2.

Trends in areas and production of six of the more important crops over the last six years are shown in the following graphs:

Selected Crops: Production and Area Harvested



Summary of Principal Crops

The following tables, which summarise the area of selected principal crops and give details of production for recent years, illustrate: (i) the importance of French and runner beans for processing and of peas for processing; and (ii) the declining importance of orchards and small fruit, and of wheat and oats for grain. Oil poppies have become an important crop in recent years but details are not included as the figures relating to production are not available for publication.

Selected Principal Crops: Area and Production

Crop	1966-67	1972-73	1973-74	1974-75	1975-76	1976-77
Area (Hectares)						
Barley for grain	8 521	12 802	11 121	12 020	11 475	11 644
Oats for grain	14 532	6 477	9 173	6 069	3 924	6 387
Wheat for grain	5 159	4 251	2 521	1 535	1 644	1 980
Total hay	82 225	58 387	91 924	80 483	71 567	72 001
Field peas	2 421	1 146	1 038	1 439	447	415
Pasture seed	2 078	840	3 982	2 219	628	1 018
Hops (a)	630	616	703	662	513	587
Beans, French and runner	393	738	1 089	1 078	1 054	1 277
Peas, green—						
For processing	6 160	4 779	4 750	4 635	5 525	6 363
Sold in pod	34	21	11	16	13	11
Potatoes	4 159	3 330	3 127	4 143	3 354	3 705
Orchard (tree) bearing—						
Apples	6 165	4 980	4 148	3 335	2 947	2 741
Pears	566	345	278	194	145	114
Berry and small fruit, bearing—						
Currants (black and red)	281	232	216	228	208	207
Loganberries	56	38	39	31	37	23
Raspberries	234	198	179	169	139	115
Strawberries	27	24	15	13	11	15

Production (Tonnes)

Barley for grain	17 503	18 711	23 790	27 266	18 389	24 571
Oats for grain	17 200	7 144	8 247	5 496	3 497	8 801
Wheat for grain	10 485	7 701	3 510	2 282	1 728	3 929
Total hay	443 919	233 037	461 459	384 257	327 239	344 549
Field peas	4 132	1 047	1 750	2 959	586	765
Pasture seed	594	166	1 130	558	141	246
Hops (b)	948	1 450	1 949	1 439	1 129	1 330
Beans, French and runner	3 686	6 237	8 840	7 982	10 077	10 996
Peas, green (c)—						
For processing	25 714	18 976	17 139	21 070	20 680	31 632
Sold in pod	46	27	18	11	8	8
Potatoes	74 476	78 286	62 866	95 610	95 614	112 276
Apples	119 719	126 430	107 060	90 230	68 712	71 781
Pears	8 080	6 040	6 180	3 160	2 853	1 434
Currants (black and red)	1 232	905	865	951	470	575
Loganberries	309	271	239	248	154	222
Raspberries	1 470	1 466	946	1 216	656	563
Strawberries	119	112	103	94	72	84

(a) Includes areas not in full bearing.

(b) Dry weight.

(c) Ex-shell weight.

Cereals for Grain

Barley has become the most important cereal grain crop, the area having levelled off after a steady increase up to 1970-71. The area of wheat for grain has remained at a low level while the area of oats for grain increased by approximately 60 per cent in 1976-77, after dropping to its lowest level this century in 1975-76. The following table shows the Tamar Statistical Sub-division as the major grain growing district with 43 per cent of the total area. The Northern Statistical Division accounted for 59 per cent of the total area of cereals for grain in 1976-77:

Area of Cereals for Grain by Statistical Division, 1976-77
(Hectares)

Cereals for grain	Hobart and Southern	Northern			Mersey-Lyell			Total Tasmania
		Tamar (a)	North Eastern (a)	Total	North Western (a)	Western (a)	Total	
Barley	3 160	5 199	1 282	6 481	2 003	—	2 003	11 644
Oats	1 938	2 855	1 344	4 199	250	—	250	6 387
Rye	2	6	—	6	—	—	—	8
Wheat	824	520	582	1 102	54	—	54	1 980
Total	5 924	8 580	3 208	11 788	2 307	—	2 307	20 019

(a) Statistical sub-division.

Legumes Mainly for Grain

The following table illustrates the geographical distribution of these crops and shows the Tamar Statistical Sub-division to be the major producer:

Area of Legumes Mainly for Grain by Statistical Division, 1976-77
(Hectares)

Crop	Hobart and Southern	Northern			Mersey-Lyell			Total Tasmania
		Tamar (a)	North Eastern (a)	Total	North Western (a)	Western (a)	Total	
Beans—								
Navy	13	83	20	103	6	—	6	122
Horse	10	37	9	46	13	—	13	69
Field peas—								
Blue	—	65	—	65	16	—	16	81
Grey, etc	46	210	2	212	76	—	76	334

(a) Statistical sub-division.

Hay and Green Feed

The following table shows the geographical distribution of hay and green feed crops:

Area of all Hay and Crops for Green Feed or Silage by Statistical Division, 1976-77
(Hectares)

Crop	Hobart and Southern	Northern			Mersey-Lyell			Total Tasmania
		Tamar (a)	North Eastern (a)	Total	North Western (a)	Western (a)	Total	
Hay—								
Pasture	10 812	20 171	11 299	31 470	27 419	29	27 448	69 730
Oaten	296	952	381	1 333	371	—	371	2 000
Other	32	121	40	161	78	—	78	271
Total	11 140	21 244	11 720	32 964	27 868	29	27 897	72 001
Crops for green feed or silage (b)	7 357	5 561	4 548	10 109	4 914	37	4 951	22 417

(a) Statistical sub-division.

(b) Includes vegetables for stock feed and pasture harvested for green feed or silage.

The North Western Sub-division, with the largest area devoted to sown pastures, produces approximately 40 per cent of the State's hay. Its predominance in area under hay and green feed crops can be related to the fact that it carries 36 per cent of the State's cattle and is the principal dairying area.

The principal green feed crop is oats (approximately 35 per cent of the total green feed area); other green feed crops include soft turnips, rape, chou moellier, barley, millet, rye-corn and wheat.

Orchard Tree Fruit and Berry and Small Fruit

Orcharding is heavily concentrated in and around the Huon Valley (Southern Statistical Division); the other main area is in the Tamar Valley (Northern Division). Berry and small fruit growing is almost entirely confined to the Derwent and Huon Valleys.

Area of Orchard Tree and Berry and Small Fruit by Statistical Division, 1976-77
(Hectares)

Type	Hobart and Southern	Northern			Mersey-Lyell			Total Tasmania
		Tamar (a)	North Eastern (a)	Total	North Western (a)	Western (a)	Total	
Orchard tree fruit	2 463	530	14	544	258	—	258	3 265
Berry and small fruit	415	2	16	18	24	—	24	457

(a) Statistical sub-division.

In the period from 1948-49 State production of berry and small fruit has dropped by over three quarters. In spite of this Tasmania is still a principal producer of raspberries and black and red currants.

Principal Small Fruits: Area and Production

Year	Currants (black and red)		Loganberries		Raspberries		Strawberries	
	Bearing area	Production	Bearing area	Production	Bearing area	Production	Bearing area	Production
	hectares	tonnes	hectares	tonnes	hectares	tonnes	hectares	tonnes
1948-49 (a)	812	2 735	86	380	844	3 449	101	395
1971-72	238	1 140	42	255	206	1 311	21	85
1972-73	232	905	38	271	198	1 466	24	112
1973-74	216	865	39	239	179	946	15	103
1974-75	228	951	31	248	169	1 216	13	94
1975-76	208	470	37	154	139	656	11	72
1976-77	207	575	23	222	115	563	15	84

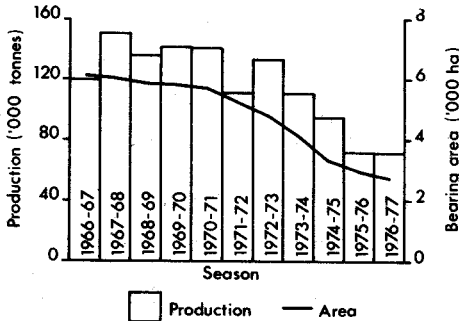
(a) Representative year from period when small fruit areas were at record level.

With the continued decline in apple production, the gross value of the apple crop for 1976-77 represented only 20 per cent of the total gross value of all crops (see the Appendix to Chapter 8). The next table gives recent details of area, production and average yield and illustrates the effect of economic problems confronting the industry.

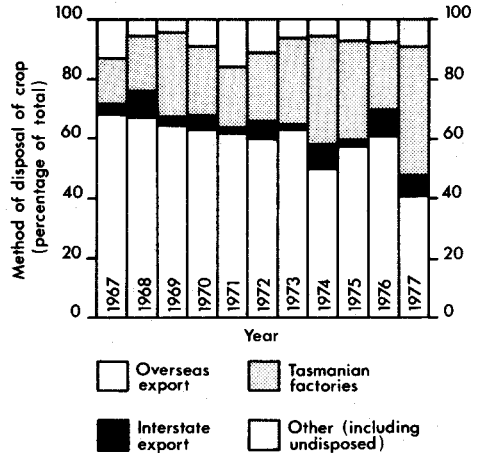
Apples: Area and Production

Season	Area		Number of trees		Production		
	Bearing	Non-bearing	Bearing	Non-bearing	Total	Yield	
						Per hectare	Per bearing tree
	hectares	hectares	'000	'000	tonnes	kg	kg
1972-73	4 980	1 097	1 977	435	133 449	26 790	68
1973-74	4 148	837	1 647	332	113 012	27 245	69
1974-75	3 335	508	1 323	202	95 247	28 560	72
1975-76	2 947	385	1 220	160	72 529	24 611	59
1976-77	2 741	311	1 132	128	71 781	26 188	63

Apples: Bearing Area and Production



Disposal of the Tasmanian Apple Crop



Economic Problems: In recent years, economic problems related to the importance of overseas markets and shipping costs have prompted the introduction of assistance to apple growers through schemes providing a stabilisation price for each variety of apple exported at risk to European markets. In the 1970-71 export season the Federal Government's *Apple and Pear Stabilisation Act* came into effect. Under this Act a support price is decided upon for each variety and, depending on the average market return for that variety, payments either into or from the fund are calculated. Pay-outs, which predominate, are made up to a maximum of eighty cents per bushel for any variety. Net amounts paid for apples under this scheme were: 1971-72, \$1 872 000; 1972-73, \$1 798 000; 1973-74, \$1 918 000; 1974-75, \$1 733 000; 1975-76, \$2 540 000; and 1976-77, \$527 358.

Since the 1973-74 season further subsidies have been provided under the *Apple Industry (Assistance) Act*. This Act, which effectively lifts the limit on payments under the stabilisation scheme, provides for equal contributions from the Federal and State Governments; however, in 1975-76 the Tasmanian Government paid an extra \$284 000. The total payments under this Act have been: 1973-74, \$3 180 000; 1974-75, \$1 144 000; 1975-76, \$742 000; and 1976-77, \$78 000.

Details relating to compensation of growers for removal of apple and pear trees are given in an earlier section. As shown earlier in this Chapter, the number of holdings with at least 0.5 hectares of orchard tree fruit (apples, pears, apricots, etc.) was only 398 at 31 March 1977 compared to 425 in 1976, 486 in 1975 and 612 in 1974; this decline is indicative of the serious problems facing the industry.

A wide variety of apples is produced in Tasmania but many only in small quantities. Of the total production of 7 181 tonnes in 1976-77, two varieties accounted for 41 per cent (granny smith, 19 per cent and democrat, 22 per cent) while jonathon, delicious (golden and other) and sturmer pippin accounted for a further 43 per cent between them.

Vegetables for Sale for Human Consumption

The concentration of vegetable growing in certain areas of the State is illustrated in the following table:

Vegetables for Sale for Human Consumption (a)
Area Under Selected Crops by Statistical Division, 1976-77
(Hectares)

Crop	Hobart and Southern	Northern			Mersey-Lyell			Total Tasmania
		Tamar (b)	North Eastern (b)	Total	North Western (b)	Western (b)	Total	
Beans, French and runner	—	17	93	109	1 167	—	1 167	1 277
Peas, green	5	1 528	397	1 925	4 444	—	4 444	6 374
Potatoes	220	119	330	449	3 034	1	3 036	3 705
Turnips, swede and white	52	5	17	23	94	1	95	169
Other vegetables	171	109	94	203	684	—	684	1 058
Total	448	1 778	931	2 709	9 424	2	9 426	12 583

(a) Includes vegetables for processing.

(b) Statistical sub-division.

Hops

The almost universal use of the 'Pride of Ringwood' hop variety has led to a general increase in per hectare yields in recent years. As well, this variety has a higher percentage of usable resin than the older types and at the same time more efficient extraction methods have been devised. This has led to a changed disposal pattern with more emphasis on export, although export markets have not been particularly rewarding recently and stockpiling has occurred.

Other changes have also recently taken place in the industry. The majority of hops now produced are seedless (through the exclusion of male plants) in order to meet changing brewery demand and the market for hop extract. This change to seedless hops means that, as yields are lower than for seeded hops, the comparability of data for the last four years with that for earlier years is affected. An increased quantity of hops is being pelletised before shipment. In this process the dried hops are hammer-milled, compressed into pellets and put into airtight containers that are either vacuum sealed or nitrogen flushed before sealing. This reduces resin losses due to oxidation, allows storage without refrigeration and decreases the bulk to be shipped.

Tasmania's total production of 1 330 tonnes in 1976-77 was over 60 per cent of the total Australian hop production of 2 139 tonnes. The next table shows details of area, production and value over a six-year period:

Hops, Tasmania: Area, Production and Value

Season	Number of growers	Total area	Production		
			Total (a)	Yield per hectare (a)	Value
		hectares	tonnes	kg	\$'000
1971-72	74	539	1 159	2 149	2 186
1972-73	73	616	1 450	2 353	2 844
1973-74	76	703	1 949	2 772	3 213
1974-75	50	662	1 439	2 174	1 238
1975-76	28	513	1 129	2 200	1 575
1976-77	26	587	1 330	2 266	2 254

(a) Dry weight.

Oil Poppies

Initially, oil poppies were grown on the mid North-West Coast, but more recently these have been grown in other parts of the State, although adverse weather conditions, particularly excessive rain, have proved to be a problem in some areas.

In 1976-77 the total area of oil poppies was 6 117 hectares compared with 4 240 hectares in the previous year, the distribution being: Hobart and Southern statistical divisions, 1 168

hectares; Northern, 2 966 hectares; and Mersey-Lyell, 1 983 hectares. Production figures are not available for publication.

Oil poppy growing provides the raw material in the production of codeine and, within Australia, is at present restricted to Tasmania where two processing plants now operate.

Pasture Seed

The geographical distribution (in hectares) of areas yielding pasture seed in 1976-77 was as follows: Northern, 798; Hobart and Southern, 166; Mersey-Lyell, 54; total, 1 018. The area of pasture seed fluctuates widely depending on farming conditions; in 1973-74, 3 982 hectares yielded seed.

The main seed varieties produced on Tasmanian farms during the past five years are listed in the following table:

Pasture Seed Production (a)
(kg)

Type of Grass	1972-73	1973-74	1974-75	1975-76	1976-77
Clover—White	6 643	22 197	22 480	6 460	6 643
Red	—	6 217	2 027	1 700	800
Other	—	1 360	—	115	260
Ryegrass—Perennial	75 338	563 870	278 258	68 432	112 718
H.1.	19 146	86 713	10 343	4 740	5 620
Italian	35 929	399 425	210 774	36 813	74 643
Cocksfoot	336	11 157	13 350	13 751	32 433
Phalaris tuberosa	5 942	10 067	9 440	1 312	710
Lucerne	1 830	8 801	5 499	6 871	5 110
Other	20 389	20 125	5 740	360	6 750
Total	165 553	1 129 932	557 911	140 554	245 687

(a) Includes all pasture seed harvested, whether as a separate crop or from an area sown to grain crops.

All Other Crops

In the table 'Area of Principal Crops' the item 'Other crops' (1 443 hectares in 1976-77) includes lavender, flower seeds, cut flowers, lupins, mint and a variety of other crops grown for seed.

LIVESTOCK

Introduction

This subject is dealt with in two parts: (i) this section, which deals with numbers of livestock on agricultural holdings; and (ii) a later section, 'Livestock Products'.

The first part needs no comment but the second part (Livestock Products) requires explanation. In relation to the various types of livestock, the following products are included:

Cattle—meat, milk, butter, cheese. *Sheep*—meat, wool.

Pigs—meat. *Poultry*—meat, eggs.

Butter, meat and cheese, although regarded as manufacturing industry products, are included in the later section 'Livestock Products', because the pattern and scale of livestock farming is closely linked to the processing of these products.

Number of Livestock on Agricultural Holdings

The following summary table shows the number of livestock on agricultural holdings for selected years since 1860:

Livestock on Agricultural Holdings: Selected Years

Year	Horses	Cattle	Sheep	Pigs
	no.	no.	'000	no.
1860 (a)	21 034	83 366	1 701	31 290
1900	31 607	165 516	1 684	68 291
1939-40 (a)	29 605	252 484	2 677	44 941
1949-50 (b)	21 197	274 740	2 170	35 841
1959-60	10 512	375 342	3 494	67 118
1969-70	6 478	646 439	4 560	111 275
1976-77	6 024	818 831	4 015	64 586
Tasmanian numbers as proportion of Australian total (1976-77)	% n.a.	% 2.6	% 3.0	% 2.9

(a) At 31 December.

(b) At 31 March from 1949-50.

Cattle

Classification

The traditional way of classifying cattle has been to call them either 'dairy' or 'beef' cattle but this has possibly been confusing since the terms may refer to either *purpose* or *breed*. In the period 1942-43 to 1962-63, the annual farm census required this dissection but the terms were not defined. As from 1963-64 the cattle groupings have been as follows: (i) bulls classified by *breed*; (ii) 'house cows' specified separately; and (iii) all other cattle classified according to *purpose* (i.e. milk production or meat production). The results of the 1975-76 and 1976-77 farm censuses are given in the following table. This closely follows the lay-out of the collection form and provides an analysis in which it is possible to isolate the number of cows and heifers directly associated with dairying:

Classification of Cattle on Agricultural Holdings at 31 March

	Description	1976	1977
Bulls used or intended for service	Dairy breed bulls (1 year and over)	2 893	2 598
	Beef breed bulls (1 year and over)	12 982	11 299
	Bull calves (under 1 year) intended for service—		
	Dairy breed bull calves	1 101	980
	Beef breed bull calves	4 243	3 518
Cows and heifers used or intended for production (for sale) of milk and cream	Cows—In milk and dry at 31 March	143 310	128 297
	Heifers (1 year and over)	35 850	31 670
	Heifer calves (under 1 year)	32 014	26 734
House cows (in milk and dry) and heifers (1 year and over) being kept primarily for own milk supply		2 970	2 299
Cattle and calves (not included above) mainly for meat production	Cows and heifers (1 year and over)	319 902	286 203
	Calves (under 1 year) including vealers	233 032	205 136
	Other (1 year and over) i.e. steers, bullocks, etc.	120 935	120 097
Total cattle and calves for all purposes		909 232	818 831

The geographical distribution of holdings with cattle is shown below:

Distribution of Cattle in Statistical Divisions, 31 March 1977

Statistical division or sub-division	Number of holdings with cattle	Total dairy cattle (a)	Total beef cattle (b)	Total cattle
Hobart and Southern	1 383	15 221	141 911	157 132
Northern—				
Tamar	1 280	46 361	145 406	191 767
North Eastern	652	22 856	151 788	174 644
Total	1 932	69 217	297 194	366 411
Mersey-Lyell—				
North Western	2 219	108 140	185 738	293 878
Western	7	—	1 410	1 410
Total	2 226	108 140	187 148	295 288
Total Tasmania	5 541	192 578	626 253	818 831

(a) Includes dairy breed bulls and bull calves, cows and heifers used or intended for production of milk and cream for sale, and house cows.

(b) Includes beef breed bulls and bull calves, and other cattle and calves mainly for meat production.

The change in classification of cattle (outlined above) makes it impossible to compare, in full detail, the description of cattle in 1964-65 and subsequent years with descriptions reported in previous years but the following table is compiled to show broad groups regarded as generally comparable:

Description of Cattle on Agricultural Holdings at 31 March

Year	Number of holdings with cattle	Bulls (1 year and over)	Cows and heifers (1 year and over)	Calves (under 1 year)	Other	Total cattle
1950	9 759	6 186	158 424	60 601	49 529	274 740
1955	9 668	7 002	194 016	78 252	40 147	319 417
1960	9 031	7 237	229 162	100 849	38 094	375 342
1965	8 384	(a) 8 311	283 955	119 455	39 750	451 471
1970	8 405	10 812	378 836	200 588	56 203	646 439
1975	7 986	16 499	502 175	279 905	122 256	920 835
1977 (b)	5 541	13 897	448 469	236 368	120 097	818 831

(a) The specification of 'Bull calves (under 1 year)' from 1963-64 may affect the comparability of the series.

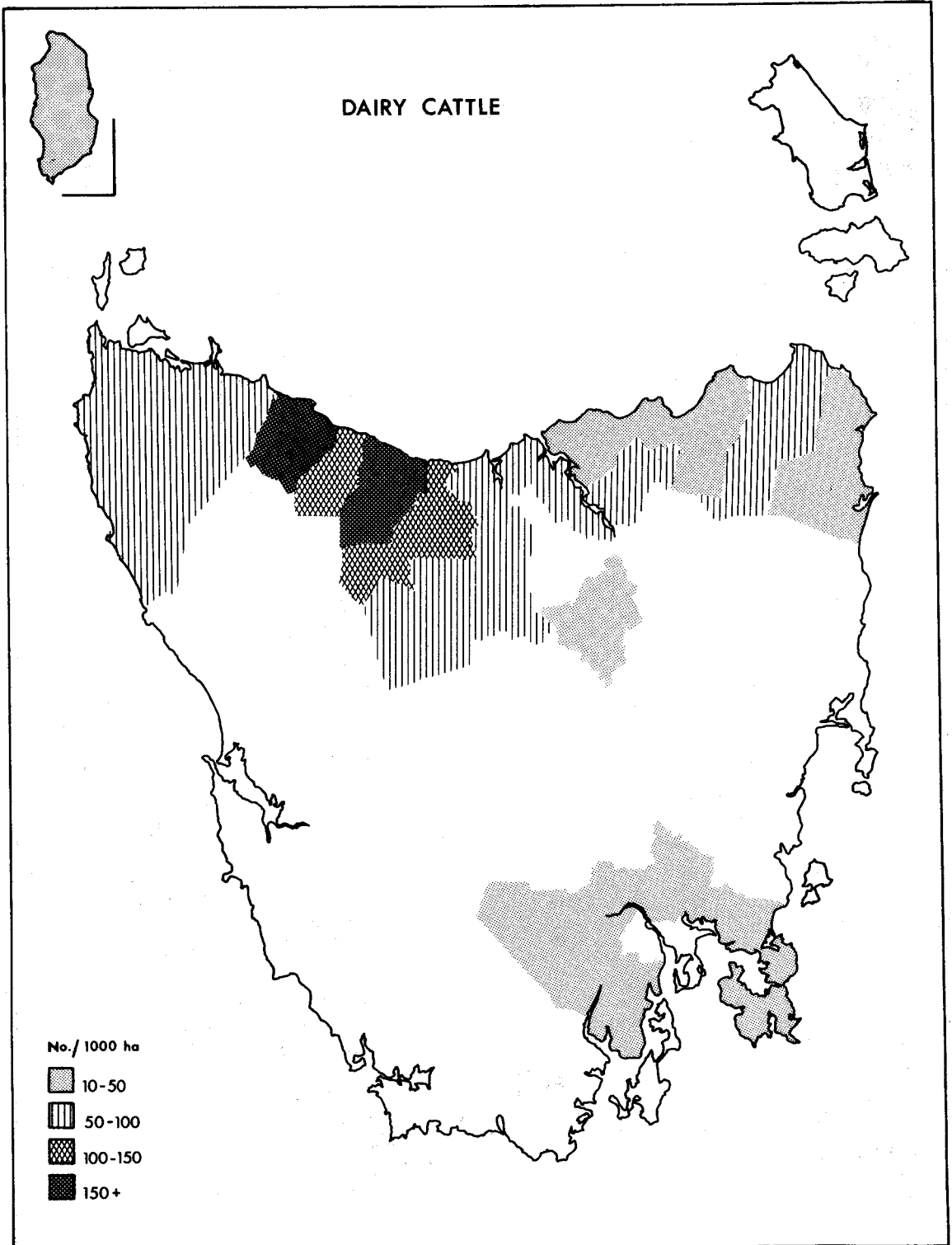
(b) Not comparable with earlier years; see definition of 'Agricultural Holding', given earlier.

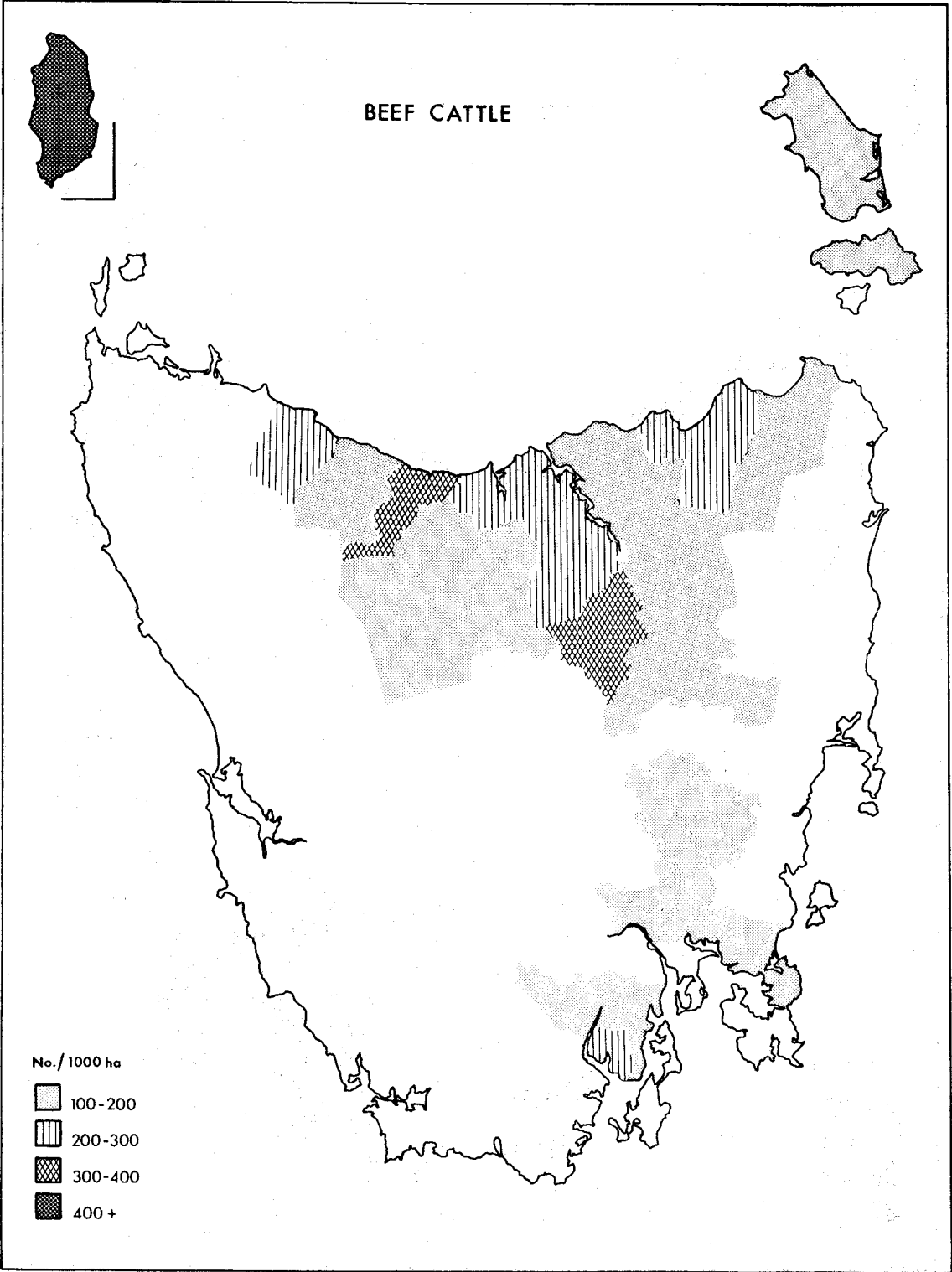
Breeds of Cattle

The main breeds of cattle in Tasmania for milk production are jersey, friesland and ayrshire with small numbers of milking shorthorn and guernsey, while breeds used for the production of beef are hereford, aberdeen angus, shorthorn and devon. In recent years, new cattle lines such as the brahmans, murray greys and charolais have been introduced by farmers wishing to utilise the advantages of cross-breeding.

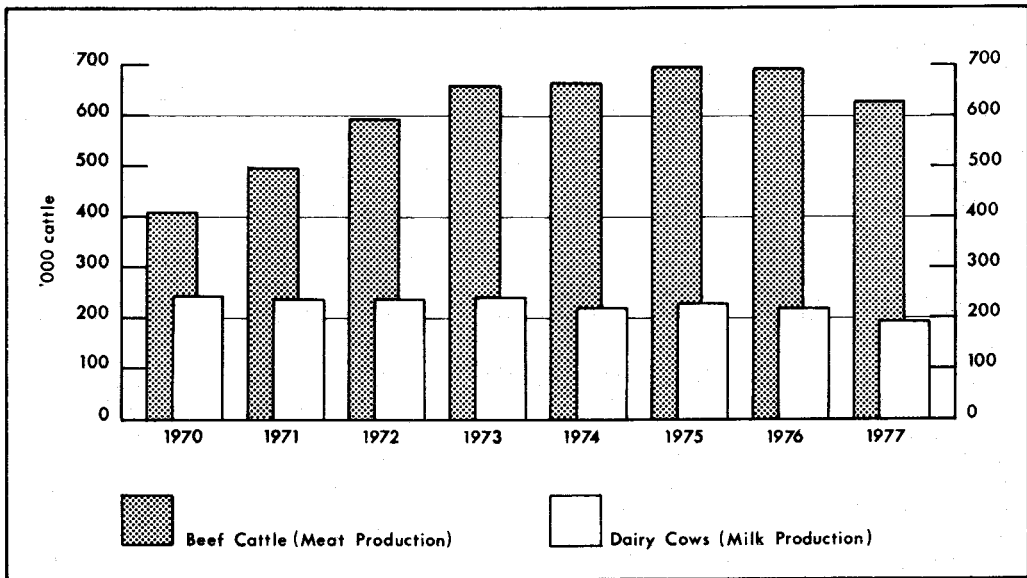
The following graph gives an indication of the recent trends in numbers of cattle according to their association with the beef industry or the dairy industry. Details of the classification used are given in the notes to a table above. For the years 1965 to 1968 there was no split of bull calves between beef and dairy so this has been estimated for the graph.

DAIRY CATTLE





Numbers of Beef and Dairy Cattle, Tasmania, 1970-1977
(Cattle Mainly for Meat Production and Cattle Mainly for Milk Production)



Sheep

The table below shows sheep numbers on agricultural holdings for recent years:

Sheep on Agricultural Holdings at 31 March
(^{'000})

Year	Sheep	Year	Sheep	Year	Sheep	Year	Sheep
1966	4 127	1969	4 395	1972	4 237	1975	4 136
1967	4 321	1970	4 560	1973	3 824	1976	4 249
1968	4 428	1971	4 517	1974	3 964	1977	4 015

The next table shows the geographical distribution and various descriptions of sheep and also details of the lambing season:

Description of Sheep at 31 March 1977 and Lambing 1976, Season, by Statistical Division

Particulars	Hobart and Southern	Northern			Mersey-Lyell			Total Tasmania
		Tamar (a)	North Eastern (a)	Total	North Western (a)	Western (a)	Total	
Holdings with sheep ... no.	994	910	426	1 336	731	1	732	3 062
Sheep ('000)—								
Rams (1 year and over)	19.3	13.8	11.9	25.7	3.5	—	3.5	48.4
Breeding ewes	755.2	471.3	436.5	907.8	130.0	—	130.0	1 793.0
Other ewes (1 year and over)	91.0	44.5	44.6	89.1	4.7	—	4.7	184.9

Description of Sheep at 31 March 1977 and Lambing 1976, Season, by Statistical Division—continued

Particulars	Hobart and Southern	Northern			Mersey-Lyell			Total Tasmania
		Tamar (a)	North Eastern (a)	Total	North Western (a)	Western (a)	Total	
Wethers (1 year and over)	530.2	182.2	270.1	452.3	24.0	—	24.0	1 006.5
Lambs and hoggets (under 1 year)	422.7	234.0	248.4	482.3	76.8	—	76.8	981.8
Total	1 818.4	945.7	1 011.5	1 957.2	239.0	—	239.0	4 014.6
Lambing, 1976 season—								
Ewes mated ('000)	686.0	445.3	393.9	839.2	114.9	—	114.9	1 640.2
Lambs marked ('000)	571.1	372.6	327.1	699.8	106.7	—	106.7	1 377.5
Marking ratio (b) (%)	83.3	83.7	83.0	83.4	92.9	—	92.9	84.0

(a) Statistical sub-division.

(b) Lambs marked as percentage of ewes mated; lamb mortality is one of the factors affecting marking ratios.

The following table summarises the descriptions of sheep and gives details of lambing on a state basis:

Description of sheep at 31 March and Details of Lambing Summary

Particulars	1967	1972	1973	1974	1975	1976(a)	1977(a)
Holdings with sheep no.	5 224	4 257	3 973	3 784	3 844	3 579	3 062
Sheep ('000)—							
Rams (1 year and over)	47	50	48	47	50	50	48
Breeding ewes	1 997	1 841	1 711	1 788	1 846	1 835	1 793
Other ewes (1 year and over)	164	265	212	194	209	225	185
Wethers (1 year and over)	1 022	952	895	937	998	1 057	1 007
Lambs and hoggets (under 1 year)	1 090	1 128	960	998	1 034	1 082	982
Total	4 321	4 237	3 824	3 964	4 136	4 249	4 015
Lambing (b)—							
Ewes mated	1 688	1 805	1 604	1 535	1 644	1 677	1 640
Lambs marked—							
Number '000	1 574	1 617	1 369	1 361	1 466	1 515	1 378
Marking ratio (c) %	93.27	89.6	85.3	88.7	89.2	90.4	84.0

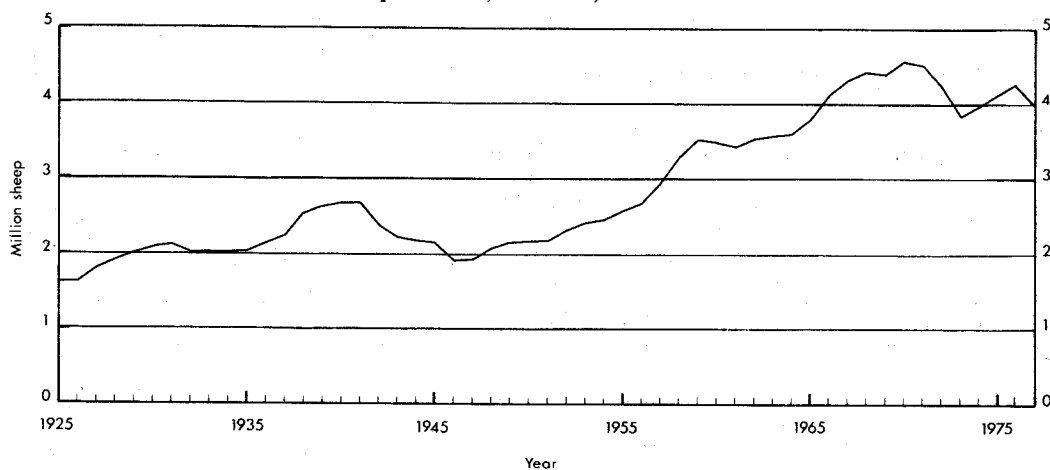
(a) Not comparable with earlier years; see definition of 'Agricultural Holding' given earlier.

(b) In the season preceding the year named.

(c) Lambs marked as percentage of ewes mated.

The following graph shows the trend in sheep numbers since 1925 and highlights the decline in the early 1970s and the subsequent partial recovery.

Sheep Numbers, Tasmania, 1925 to 1977



Breeds of sheep

The merino is the mainstay of the Australian wool industry and accounts for over 75 per cent of the Australian sheep population. However, in Tasmania the predominant sheep breeds are polwarth and corriedale; both were originally developed from merino cross-breeds. A new sheep breed, the 'cormo', has been developed in Tasmania to suit local conditions and to provide a highly fertile breed having a high yield of fine wool and good body conformation.

Over the past 10 years, the breeds of sheep reported by growers have shown a trend in favour of polwarths. The following table shows the main breeds of sheep (including rams) as percentages of total sheep:

**Proportion of Breeds of Sheep at 31 March (a)
(Per Cent)**

Breed	1967	1968	1969	1970	1971	1974	1977
Polwarth	39.9	40.5	41.7	42.5	43.6	44.0	42.6
Corriedale	19.5	18.0	17.3	15.4	14.4	13.1	12.4
Merino	8.0	7.1	7.7	7.9	8.9	10.7	10.5
Cormo	—	—	—	0.5	1.0	1.9	3.0
Romney marsh	2.2	2.0	1.9	1.2	1.3	0.7	1.1
Other breeds (b)	3.0	3.0	3.3	3.5	3.9	4.4	5.4
Comebacks	10.5	10.7	11.1	12.6	11.8	14.8	13.9
Cross-breeds	17.0	18.7	17.0	16.4	15.0	10.4	11.1
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0

(a) Similar data are not available for 1972, 1973, 1975 or 1976.

(b) Recognised breeds of sheep which individually, in 1977, accounted for about one per cent or less of all sheep; includes cheviot, dorset horn, border leicester, English leicester, ryeland, southdown, suffolk, lincoln, poll dorset, shropshire, hampshire down and perendale.

The majority of all breeds of sheep are run on improved pastures. However particularly in the Midlands, use is made of considerable areas of unimproved 'run' country for polwarths comebacks and merinos. The Central Plateau also provides summer grazing, particularly for wethers.

Pigs

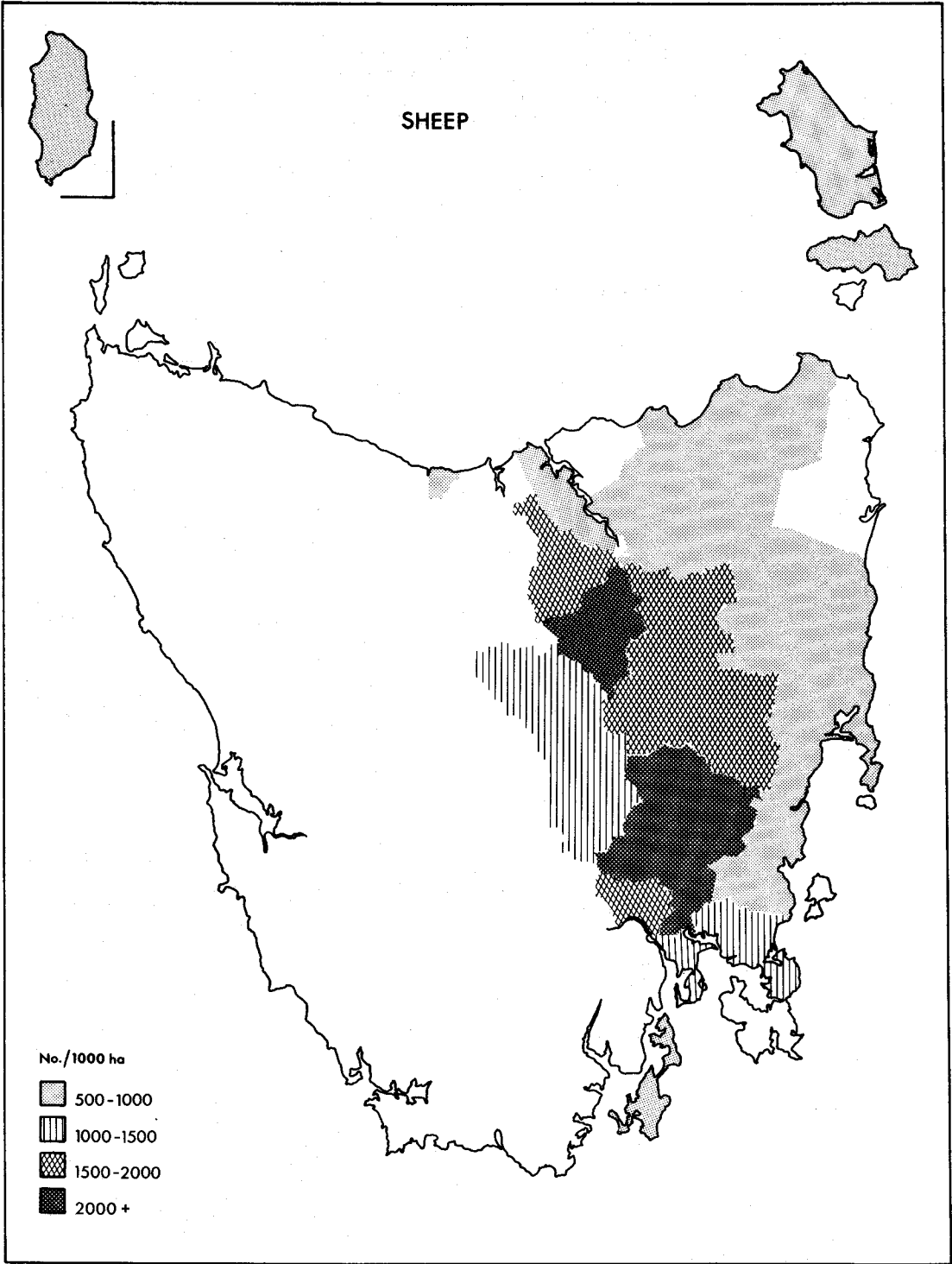
The geographical distribution of pigs, by statistical division, is shown in the next table:

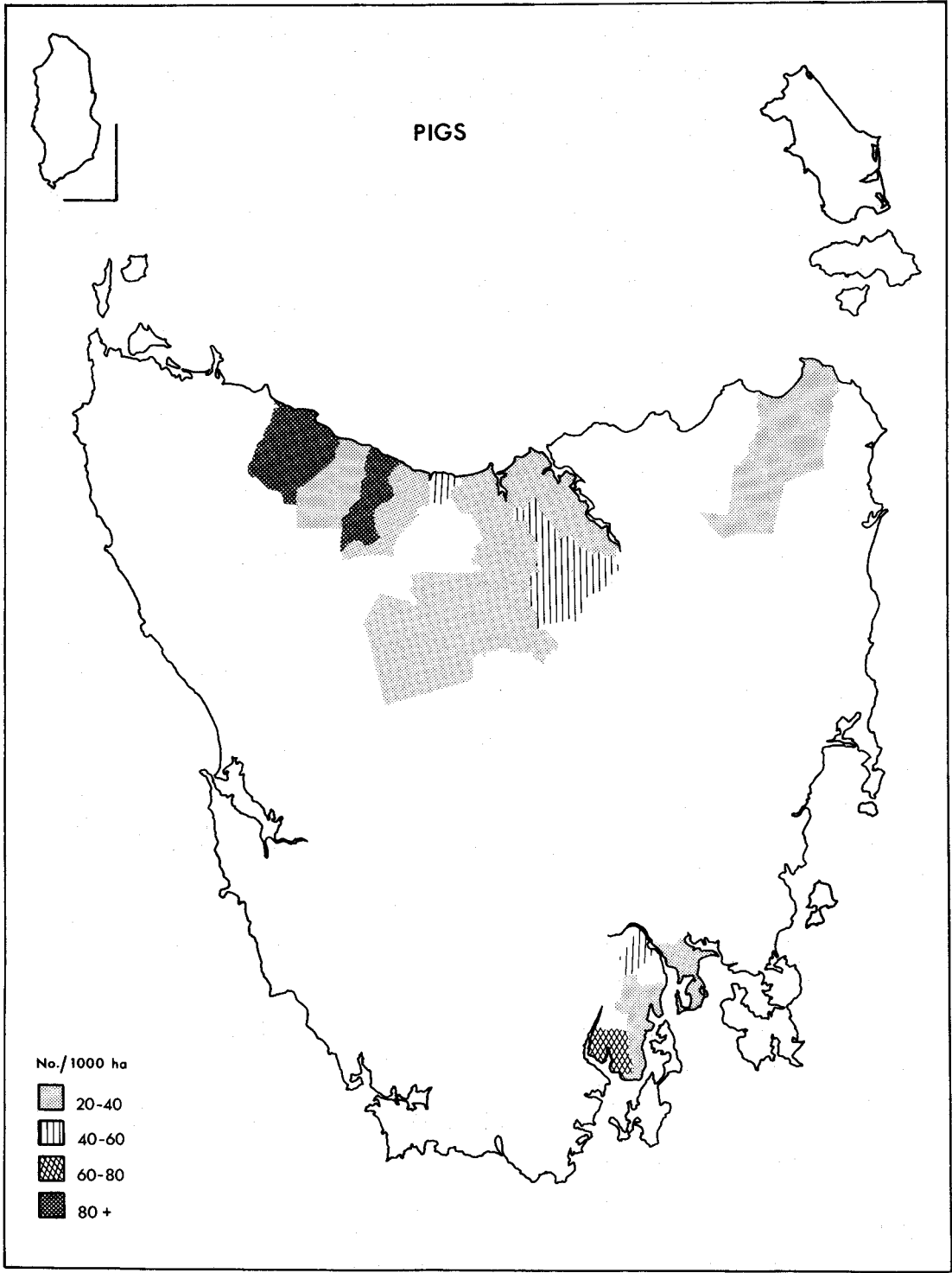
Distribution of Pigs by Statistical Division at 31 March 1977

Particulars	Hobart and Southern	Northern			Mersey-Lyell			Total Tasmania
		Tamar (a)	North Eastern (a)	Total	North Western (a)	Western (a)	Total	
Holdings with pigs (no.)	197	268	114	382	319	2	321	900
Pig numbers—								
Boars	156	275	138	413	378	3	381	950
Breeding sows	1 612	2 587	1 392	3 979	4 066	18	4 084	9 675
Other (b)	8 136	14 610	8 845	23 455	22 322	48	22 370	53 961
Total pigs	9 904	17 472	10 375	27 847	26 766	69	26 835	64 586

(a) Statistical sub-division.

(b) Includes baconers and porkers, backfatters, stores, weaners, suckers and slips.





Pig Population

The pig population at 31 March each year is not, in itself, a very meaningful figure. It is possible for a sow to produce two litters within the one year and for the offspring to number more than 10 in each litter. It follows, therefore, that the real measure of activity in pig-raising is not so much the size of the pig herd at a particular point in time, but rather the number of pigs slaughtered and the dressed carcass weight of the meat so produced; such information is given in the 'Livestock Products' section of this chapter.

In the previous table the most significant item is the number of breeding sows. A sow can be mated when only nine or ten months old and the gestation period is a mere four months. Piglets are weaned at four to six weeks—this early weaning calls for more skilled management but has advantages of avoiding heavy weight loss by the sow and reducing the period between litters.

The following table summarises pig numbers from 1955:

Pigs on Agricultural Holdings at 31 March: Summary

Year	Holdings with Pigs	Boars	Breeding sows	Other (a)	Total pigs
1955.....	4 235	1 608	9 065	47 709	58 382
1960.....	3 681	2 075	10 730	54 313	67 118
1965.....	3 315	2 327	14 578	75 116	92 021
1970.....	2 302	1 978	16 629	92 668	111 275
1975.....	1 010	976	9 243	53 754	63 973
1977 (b).....	900	950	9 675	53 961	64 586

(a) Includes baconers and porkers, backfatters, stores, weaners, suckers and slips.

(b) Not comparable with earlier years; see definition of 'Agricultural Holding', given earlier.

LIVESTOCK PRODUCTS

The statistics in the following section refer, in the main, to quantities of livestock products. The associated values will be found under 'Value of Production' in Chapter 8.

Wool

Wool Production

For statistical purposes, the total amount of wool produced in the State in any year consists of not only the 'clip' (shorn wool) but also of the wool on skins, irrespective of whether it is actually removed by local fellmongers or exported on skins. Production figures for recent years are given in the next table:

Wool Production (a) Summary
(⁰⁰⁰ kg)

Year	Shorn wool (including crutchings)	Fell-mongered wool, and wool exported on skins	Total	Year	Shorn wool (including crutchings)	Fell-mongered wool, and wool exported on skins	Total
1971-72.....	18 573	2 490	21 063	1974-75.....	17 147	1 741	18 888
1972-73.....	15 973	2 180	18 154	1975-76.....	17 962	1 989	19 951
1973-74.....	16 021	1 528	17 549	1976-77.....	16 174	1 935	18 109

(a) Fellmongered wool has been converted to greasy wool equivalent weight.

As illustrated in the previous table the shorn wool component has accounted for almost 90 per cent of total wool production over the last 6 years.

Total wool production of 21 861 000 kilograms in 1969-70 is the highest recorded wool output for Tasmania. However, uncertain economic conditions in the wool industry for

subsequent years have resulted in a substantial decline in wool production.

Export of Wool

Export details for wool for recent years are given in the following table:

Exports of Wool, Greasy (Overseas and Interstate)
(*000 kg)

Year	Quantity	Year	Quantity	Year	Quantity
1968-69	15 799	1971-72	20 413	1974-75	15 947
1969-70	16 513	1972-73	17 735	1975-76	17 436
1970-71	17 146	1973-74	16 963	1976-77	16 157

It should be noted that not all Tasmanian wool is exported, some being used, after scouring, etc., for manufacturing purposes within the State. Any locally processed wool exported is excluded from the above table.

Shorn Wool

The principal months for shearing in Tasmania are October, November and December, but during more recent years an increasing number of farmers have been shearing outside the traditional spring period. Such practices not only facilitate flock and property management but also provide more continuous employment for shearers and shed hands. The following table gives shearing details for recent years:

Shearing and Shorn Wool Obtained

Year	Numbers shorn			Shorn wool obtained			Average yield		
	Sheep	Lambs	Total	From sheep (a)	From lambs	Total	From sheep (a)	From lambs	Total
	'000	'000	'000	'000 kg	'000 kg	'000 kg	kg	kg	kg
1971-72	3 711	895	4 607	17 441	1 132	18 573	4.69	1.26	4.03
1972-73	3 413	838	4 251	15 038	935	15 973	4.41	1.12	3.76
1973-74	3 280	821	4 101	15 010	1 011	16 021	4.57	1.23	3.90
1974-75	3 417	736	4 153	16 182	965	17 147	4.73	1.31	4.12
1975-76	3 579	772	4 351	16 930	1 032	17 962	4.73	1.34	4.13
1976-77	3 492	737	4 229	15 247	927	16 174	4.37	1.26	3.82

(a) Includes crutchings from sheep.

In 1976-77, 45 per cent of the shorn wool produced in Tasmania came from the Hobart and Southern Statistical Divisions combined; the Tamar and North-Eastern Sub-divisions contributed 23 and 27 per cent of the total, respectively.

The next table shows the geographical distribution of shorn wool production:

Shearing and Shorn Wool Obtained (a) by Statistical Division, 1976-77

Particulars	Hobart and Southern	Northern			Mersey-Lyell			Total Tasmania
		Tamar (b)	North Eastern (b)	Total	North Western (b)	Western (b)	Total	
NUMBER SHORN ('000)								
Sheep	1 631	794	901	1 695	166	—	166	3 492
Lambs	280	201	201	402	55	—	55	737

Shearing and Shorn Wool Obtained (a) by Statistical Division, 1976-77—continued

Particulars	Hobart and Southern	Northern			Mersey-Lyell			Total Tasmania
		Tamar (b)	North Eastern (b)	Total	North Western (b)	Western (b)	Total	
SHORN WOOL OBTAINED (tonnes)								
From—Sheep	6 965	3 451	4 100	7 551	730	—	730	15 247
Lambs	323	263	257	520	83	—	83	927
Total	7 288	3 714	4 357	8 072	813	—	813	16 174
AVERAGE YIELD (c) (kg)								
Sheep	4.27	4.35	4.55	4.46	4.40	—	4.40	4.37
Lambs	1.15	1.31	1.28	1.29	1.52	—	1.52	1.26

(a) Includes crutchings from sheep.

(b) Statistical sub-division.

(c) Per sheep or lamb shorn.

Wool Auctions

The bulk of Tasmanian shorn wool is marketed in Hobart and Launceston at auctions organised by wool-selling brokers. Four auction sales are held each year—in October, December, February and June, with the February sale being the most important.

In addition to wool sold at auctions, some wool is bought direct from growers by dealers and by local manufacturers of woollen goods. A small proportion of the State's wool is marketed at Victorian auctions; growers on King Island and Flinders Island tend to use this outlet because of sea transport factors.

The following table shows the average price of shorn greasy wool sold at Tasmanian auctions in selected years since World War II and also the value of all wool produced. After a period of very low prices there was an upsurge in demand in 1972-73, particularly from Japanese buyers, and prices rose strongly. High prices continued until early 1974 when, with wool users turning to alternatives, buyers were being left with large stockpiles and prices started dropping. At this time the Australian Wool Corporation was established with the administration of the flexible reserve price scheme as part of its duties. A floor price of 300 cents per kilogram for 21 micron wool on a clean basis was originally set with the Wool Corporation carrying out 'support buying'. The market declined further, however, and the minimum price dropped to 250 cents for the 1974-75 and 1975-76 seasons. Prior to the devaluation of the Australian dollar in November 1976, the floor price was set at 275 cents for the 1976-77 season. After the devaluation the price was raised to 284 cents.

Tasmanian Average Auction Price and Total Value of Wool Produced

Year	Average auction price per kg of shorn greasy wool	Total value of wool produced (a)	Year	Average auction price per kg of shorn greasy wool	Total value of wool produced (a)
	cents	\$'000		cents	\$'000
1949-50	131	9 530	1972-73	229	(b) 37 481
1959-60	114	16 508	1973-74	192	31 973
1964-65	109	19 050	1974-75	137	23 890
1969-70	88	18 081	1975-76	157	28 420
1971-72	86	(b) 18 001	1976-77	210	34 993

(a) Includes value of shorn wool, fellmongered and dead wool and estimated value of wool exported on skins.

(b) Includes Government wool deficiency payments of \$1 258 000 in 1971-72 and \$112 000 in 1972-73.

The preceding price series refers only to shorn greasy wool sold at auction. In arriving at the value series for all wool produced, account is taken not only of wool sold at auction but

also of direct growers' sales to dealers, manufacturers and fellmongers plus estimated value of wool exported on skins.

Classification of Greasy Wool Sold at Auction

The following information is compiled by the Wool Statistical Service of the Australian Wool Corporation on the basis of catalogues of auction sales. Wool sold at auction is classified according to quality which is expressed in terms of average fibre diameter. This is measured in millionths of a metre (microns).

Mean Micron Analysis (a) of Greasy Wool Sold at Auction
(Source: Australian Wool Corporation)

Average fibre diameter (mean microns)	Greasy wool sold at auction—percentage of total			
	In Tasmania		In Australia	
	1975-76	1976-77	1975-76	1976-77
Finer than 18	0.2	0.7	—	0.1
18	1.7	2.5	1.1	1.4
19	3.2	3.0	4.6	5.2
20	1.7	1.6	9.0	9.7
21	8.7	12.0	17.8	20.4
22	12.5	15.5	21.4	21.8
23	12.4	12.8	16.0	15.4
24	14.0	12.1	8.5	6.9
25	11.5	11.2	4.4	3.8
26	7.0	5.1	3.9	3.4
27	7.5	6.9	3.2	3.1
28	4.8	3.9	2.7	2.4
29	0.4	0.3	0.2	0.2
30	7.0	5.9	3.3	3.0
32	2.5	0.2	1.2	0.1
33	0.4	2.0	0.1	0.9
34	0.9	0.1	0.3	—
35	—	0.5	—	0.2
36	0.3	—	0.1	—
38	0.6	0.7	0.2	0.3
Coarser than 38	0.2	0.2	—	—
Oddments	2.5	2.7	2.0	1.8
Total	100.0	100.0	100.0	100.0

(a) A micron equals one millionth of a metre; the measurement relates to fibre diameter.

While the proportion of fine wool is comparatively low in the Tasmanian clip (since the State is historically and climatically a producer of cross-bred wool), growers offering fine wool sell a high proportion of superfine merino wool at premium prices.

Clean Wool Yield

In 1976-77 the Tasmanian proportion of auctioned greasy wool classified as 'finer than 25 mean microns' was 60 per cent, whereas the corresponding Australian proportion was 81 per cent. There is usually a difference of this order, but the Tasmanian average price is nevertheless usually a few cents above the Australian auction average. Tasmanian averages, with Australian equivalents in brackets, have been (in cents): 1973-74, 191.82 (181.16); 1974-75, 137.46 (126.99); 1975-76, 156.57 (143.25); and 1976-77, 193.23 (182.73). This apparent contradiction is explained by taking into account a second factor, not included in the foregoing quality analysis, namely the yield of clean wool that can be obtained from greasy wool. In respect of this factor, Tasmanian wools tend to yield higher than Australian; both natural and artificial environmental factors operate to the advantage of the Tasmanian clip. Evidence of this peculiarity of Tasmanian wool is provided in the next table which suggests that Tasmanian wool is freer from dust and vegetable matter than wool produced in other states.

Average Clean Yield of Wool Clip, Tasmania and Other Australian States
(Source: Australian Wool Corporation)

State of sale (a)	Yield of clean wool from greasy (per cent)					
	1966-67	1972-73	1973-74	1974-75	1975-76	1976-77
New South Wales	56.19	57.64	58.33	60.54	61.06	60.78
Victoria	59.72	59.29	60.24	61.55	62.02	61.14
Queensland	54.68	54.89	55.96	59.04	58.91	58.68
South Australia	54.00	54.01	56.77	58.76	57.90	56.70
Western Australia	55.55	52.29	54.26	57.69	58.42	57.50
Tasmania	62.99	63.14	65.05	66.21	67.01	66.86
Australia	56.94	56.43	58.08	59.93	60.18	59.21

(a) Wool from other Australian states is not sold at Tasmanian auctions so, for Tasmania, 'State of sale' and 'State or origin' are virtually the same except that some wool from Tasmania (mainly King and Flinders Islands) is sold at Victorian auctions.

Meat

Slaughtering

The following table summarises slaughtering activity for recent years:

Stock Slaughtered (a) for Human Consumption: Summary
(^{'000})

Year	Cattle and calves	Sheep and lambs	Pigs	Year	Cattle and calves	Sheep and lambs	Pigs
1949-50	58	508	51	1972-73	261	1 278	152
1954-55	75	643	79	1973-74	259	825	116
1959-60	145	1 166	115	1974-75	262	980	101
1964-65	174	987	135	1975-76	348	1 069	94
1969-70	178	1 297	160	1976-77	358	993	100

(a) In all registered slaughtering establishments and on farms.

To fully record the level of meat production for human consumption, statistics are obtained in respect of operations in abattoirs, other slaughtering establishments and factories, and slaughtering on farms.

The next table analyses the items 'Cattle and calves' and 'Sheep and lambs':

Stock Slaughtered (a) for Human Consumption
(^{'000})

Year	Cattle and calves				Sheep and lambs			Pigs
	Bulls, bullocks & steers	Cows and heifers	Calves	Total	Sheep	Lambs	Total	
1971-72	96	69	19	185	813	662	1 475	165
1972-73	125	110	26	261	637	642	1 278	152
1973-74	126	104	30	259	336	490	825	116
1974-75	149	75	37	262	403	577	980	101
1975-76	164	119	65	348	455	614	1 069	94
1976-77 (b)	145	140	73	358	469	524	993	100

(a) In all registered slaughtering establishments and on farms.

(b) In 1976-77 the on-farm components of total livestock slaughtered were: cattle and calves, 5 379; sheep and lambs, 61 794; pigs, 1 286.

Meat Production

Statistics of actual carcass weight rather than numbers of stock slaughtered provide a more precise measure of actual meat production and annual trends. The necessary weight data are collected from abattoirs, factories and licensed slaughterhouses (including 'country butchers'); in the case of livestock killed on farms, only the numbers are available and the resulting carcass weight has to be estimated. Statistics in terms of carcass weight covering the same field as the previous tables on slaughtering are shown in the following table:

Production of Meat
(^{'000} tonnes—Carcass Weight)

Year	Beef and veal			Mutton and lamb			Pigmeat (a)	Total meat
	Beef	Veal	Total	Mutton	Lamb	Total		
1971-72	34.4	0.4	34.8	16.3	10.9	27.2	8.3	70.3
1972-73	46.9	0.5	47.5	12.2	10.3	22.5	7.4	77.4
1973-74	45.7	0.6	46.3	6.7	8.1	14.8	5.5	66.5
1974-75	47.6	0.7	48.3	8.0	9.5	17.5	4.9	70.7
1975-76	57.9	1.2	59.2	9.0	9.8	18.8	4.5	82.5
1976-77	55.8	1.6	57.4	8.5	8.2	16.7	4.9	79.0

(a) Includes pork for manufacture into bacon and ham.

Export of Meat

The next table shows exports of edible meat from cattle, sheep and pigs by weight. Export weight cannot be directly compared with production weight since the former includes boneless meat and meat which has had its fat content reduced, while the latter is in terms of carcass weight.

Exports of Meat, 1976-77
(Tonnes)

Destination	Beef and veal	Lamb	Mutton	Pork	Offal (edible)	Bacon and ham
Interstate	2 263	805	246	209	6	34
Overseas	14 199	1 065	2 999	84	1 007	4
Total	16 463	1 871	3 245	292	1 013	39

The importance of Tasmania's overseas meat trade can be judged from Australian Meat Board estimates of the percentage of Tasmanian production actually exported. The trends in recent years are shown by the following table:

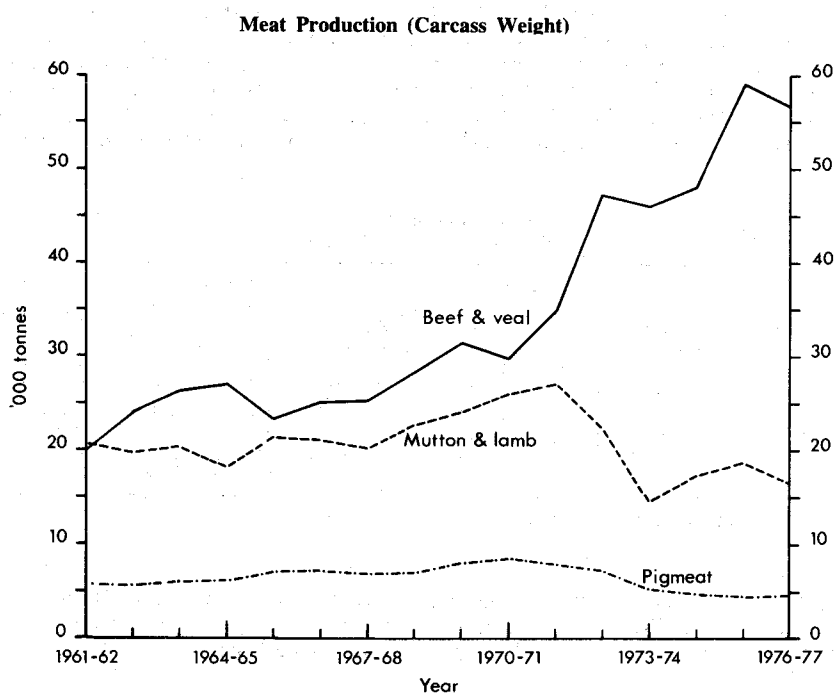
Proportion of Tasmanian Meat Production Exported Overseas (a)
(Source: Australian Meat Board)
(Per Cent)

Type of meat	1971-72	1972-73	1973-74	1974-75	1975-76	1976-77
Beef and veal	44.0	44.2	47.0	37.7	r 43.2	48.5
Mutton	59.6	53.7	40.5	55.0	r 67.8	73.3

(a) The estimated percentages are derived by converting actual export weights to a carcass weight equivalent, thus giving a basis for comparison with production figures.

Meat Export Works

At 30 June 1977 there were eight establishments in Tasmania licensed to export meat. These were located at Launceston (two), Hobart, Longford, Smithton, Devonport, Somerset and King Island.



Bacon and Ham

In the tables on meat production, the product from pig slaughtering has been referred to as 'pigmeat'. A large proportion of 'pigmeat' is converted into ham and bacon in Tasmania. Considerable quantities of pigmeat are also exported and used, in part, for making bacon and ham in other states. The next table summarises the production of bacon and ham since 1949-50:

**Production of Bacon and Ham, Tasmania
(Tonnes)**

Year	Bacon and ham			Year	Bacon and ham		
	Factory (a)	Farm	Total (b)		Factory (a)	Farm	Total (b)
1949-50	963	44	1 007	1972-73 (c) ..	1 902	n.a.	1 902
1954-55	1 008	36	1 044	1973-74	1 931	n.a.	1 931
1959-60	1 138	24	1 162	1974-75	2 169	n.a.	2 169
1964-65	1 177	13	1 190	1975-76	2 356	n.a.	2 356
1969-70	1 403	n.a.	1 403	1976-77	2 434	n.a.	2 434

(a) From 1959-60 includes small quantities made in establishments not classified as factories.

(b) Excludes farm production from 1967-68.

(c) From 1970-71 all weights are on a bone-in basis; earlier figures include an element of unconverted bone-out weights.

Dairy Products

In 1976-77 Tasmania's production of milk was 423 million litres which was about 2.9 per cent lower than the level in 1975-76.

The following table summarises milk production and utilisation since 1964-65:

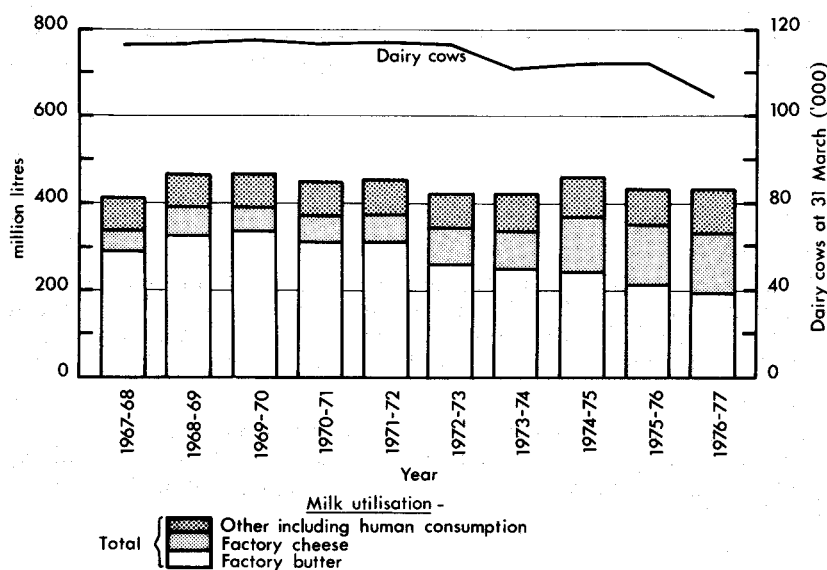
Milk Production and Milk Utilisation: Summary

Year	Quantity of milk used for—			Total milk production	Dairy cows at 31 March	Average annual production of milk per dairy cow (b)
	Factory butter	Factory cheese	Other purposes (a)			
	'000 litres	'000 litres	'000 litres	'000 litres	No.	Litres
1964-65	293 773	23 935	79 361	397 069	143 257	2 678
1969-70	336 715	54 194	78 306	469 216	155 040	2 955
1973-74	252 766	84 662	84 386	421 814	140 401	2 788
1974-75	248 075	123 781	88 665	460 521	143 719	3 165
1975-76	218 793	133 206	83 087	435 086	143 310	2 965
1976-77	197 244	131 333	94 094	422 671	128 297	3 053

(a) Milk used for 'Other purposes' goes into the making of cream, ice cream, milk powder, concentrated milk, and other preserved milk products. It includes milk consumed as such and the milk equivalent of farm-made butter and cheese.

(b) Average annual yield is based on the estimated number of dairy cows, including house cows, which were in milk during any part of the year. (The mean of the number of dairy cows and house cows at 31 March in the year of production and in the preceding year is used for this purpose.) The figures should therefore be treated as an index rather than as an actual average quantity of milk produced per dairy cow.

Milk Production and Number of Dairy Cows

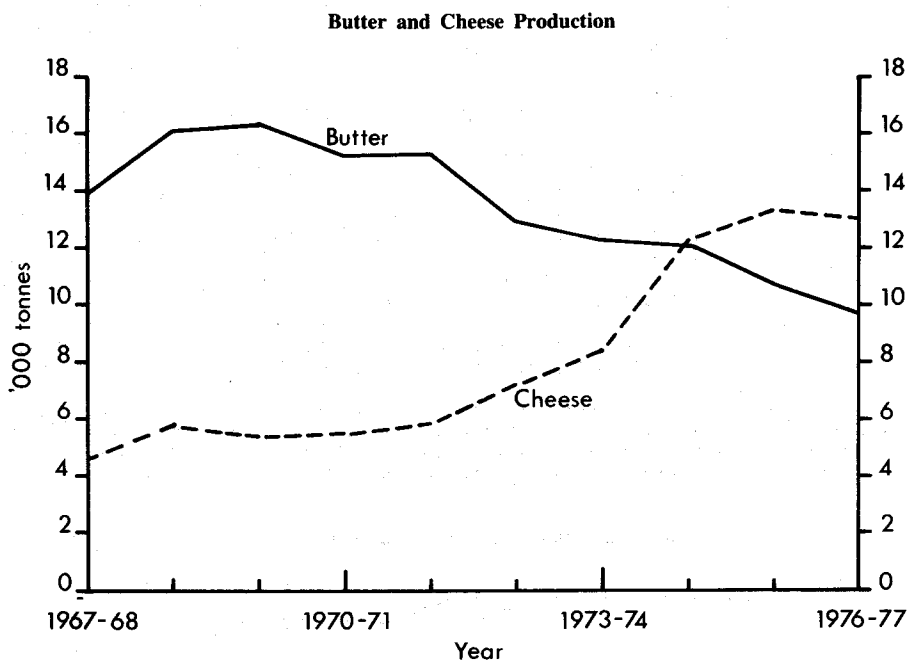


The following table shows details of factory production of butter and cheese for recent years:

Factory Production of Butter and Cheese
(Tonnes)

Year	Butter (a)	Cheese	Year	Butter (a)	Cheese
1969-70	16 343	5 407	1973-74	12 398	8 475
1970-71	15 273	5 556	1974-75	12 196	12 387
1971-72	15 318	5 923	1975-76	10 762	13 332
1972-73	12 947	7 218	1976-77	9 707	13 156

(a) Includes butter equivalent of butter oil.



Consumption of Butter

Over the past decade there has been a substantial decline in the annual Tasmanian per capita consumption of butter. The decline may be partly attributed to the greater use of margarine. However, in 1976-77 the State's average butter consumption of 7.5 kg per head of population was still well above the Australian figure of about 5.8 kg per person.

Disposal of Butter

Tasmania is a butter exporting state. The quantity of butter exported interstate and overseas varies from year to year depending on seasonal and market conditions.

Details of production, exports and consumption of butter within Tasmania for recent years are given in the following table:

**Butter (a): Production, Exports and Local Consumption
(Tonnes)**

Year	Production (factory)	Net exports (b)	Local consump- tion (c)	Year	Production (factory)	Net exports (b)	Local consump- tion (c)
1971-72	15 318	10 138	4 712	1974-75	12 196	5 071	4 052
1972-73	12 947	7 514	4 452	1975-76	10 762	9 955	3 532
1973-74	12 398	8 275	4 176	1976-77	9 707	4 166	3 068

(a) Includes butter equivalent of butter oil.

(b) Net and gross are identical as there were no imports during the years shown. Includes overseas and interstate exports.

(c) Quantity of butter released for the Tasmanian market (as supplied by the Commonwealth Dairy Produce Equalisation Committee Ltd) less the butter content of major commodities exported.

Bee-farming

The next table, which summarises beekeeping statistics from 1971-72, is restricted to details from apiarists with 40 or more hives:

Bee-farming

Year	Apiarists	Hives	Honey produced		Beeswax produced	
			Quantity	Average per productive hive	Quantity	Average per productive hive
	no.	no.	tonnes	kg	tonnes	kg
1971-72	58	9 632	365	45.4	5.8	0.73
1972-73	55	9 292	388	49.2	5.2	0.66
1973-74	67	11 323	455	46.9	6.4	0.66
1974-75	62	10 738	574	62.1	8.4	0.91
1975-76	63	10 932	626	70.1	11.7	1.31
1976-77	72	12 635	553	58.1	8.2	0.86

Of the 72 apiarists with 40 or more hives in 1976-77, 29 with 100 or more hives contributed 88.3 per cent of the total honey produced.

Tasmania is both an exporter and importer of honey with exports generally having a higher unit value than imports. The Tasmanian market shows a preference for the clover type of honey rather than the stronger flavoured leatherwood. Tasmania produces a high quality product but producers in mainland states have significant cost advantages in packaging because of the quantities involved. Therefore considerable quantities of honey are imported from other states, both for manufacturing and for retail outlets, while much of Tasmania's production, particularly leatherwood but also clover, is exported.

A proportion of the larger commercial apiarists can be described as 'migratory' in the sense that they seasonally move their hives for access to leatherwood, growing in the Western Sub-division and near the new Lake Gordon. Leatherwood, *Eucryphia lucida*, from which a distinctively flavoured honey is produced, is unique to Tasmania. The quantity of leatherwood honey produced varies considerably from year to year depending upon the amount of blossom and weather conditions. In 1976-77 it accounted for 36.8 per cent of total honey production compared with 58.8 per cent the previous year and 21 per cent in 1966-67. The following table gives details of Tasmanian exports and imports of honey:

Production, Imports and Exports of Honey
(^{'000} kg)

Year	Production (a)	Imports	Exports
1971-72	365	83	301
1972-73	388	105	220
1973-74	455	123	218
1974-75	574	120	244
1975-76	626	133	370
1976-77	553	122	367

(a) By apiarists with 40 or more hives.

Poultry Farming

Household Production: Many householders have small flocks of up to 20 birds (i.e. below the legal minimum requiring registration and payment of fees) and surveys suggest that these 'back-yard' flocks may produce up to 50 per cent of all eggs. However, no accurate statistics are available for this component and it is excluded from the tables that follow.

Commercial Producers: Producers with small flocks over the legal minimum size (more than 20 birds) may nevertheless keep them mainly for their own use rather than for the sale of eggs. Accordingly, it was also decided to exclude from the statistics producers with less than 100 birds (of all types); the Bureau's 1966-67 census of the poultry industry established that

producers with between 20 and 100 birds numbered 213 but owned only three per cent of the total number of hens and laying pullets in commercial flocks in Tasmania.

In the poultry industry, as in many other primary industries, there has been a trend to fewer but larger establishments in recent years. In 1967 there were 196 poultry farms with a total of 189 600 hens and laying pullets; by 1977 the number of farms had decreased to 68 with 238 100 hens and laying pullets and 478 000 other poultry. A size classification of the 68 farms in 1977 shows that 26 farms (only 38 per cent of farm numbers) possessed 87 per cent of laying stock. Thirty-five per cent of the poultry farms had less than 500 laying birds each.

Poultry Numbers and Egg Production, 1976-77
Commercial Producers Only (a)

Statistical division	Number of holdings with poultry	Poultry numbers at end of year			Eggs produced during year (b)
		Hens and laying pullets (c)	Other fowls	Ducks and drakes, turkeys and geese	
	no.	'000	'000	'000	'000 doz.
Hobart	13	65.0	43.2	n.p.	969.2
Southern	19	58.3	384.2	—	968.1
Northern	23	89.1	23.7	n.p.	1 295.2
Mersey-Lyell	13	25.7	24.3	2.4	411.4
Total Tasmania	68	238.1	475.3	2.7	3643.9

(a) Relates to holdings that possessed 100 or more birds of all types at 30 June 1977.

(b) Hen and pullet eggs only.

(c) Not comparable with Egg Marketing Board series due to different definitions.

Poultry Slaughtering

Poultry slaughtering statistics are collected from all known establishments slaughtering 100 or more birds (of all types) annually.

Number and Weight of Poultry Slaughtered (a)

Year	Number ('000)	Live weight		Dressed weight (b)	
		Total (tonnes)	Average per bird (kg)	Total (tonnes)	Average per bird (kg)
CHICKENS (c)					
1973-74	1 756	2 832	1.6	1 961	1.1
1974-75	1 895	3 345	1.8	2 340	1.2
1975-76	1 911	3 257	1.7	2 329	1.2
1976-77	2 453	4 157	1.7	3 060	1.2
OTHER FOWLS (d)					
1973-74	111	246	2.2	160	1.4
1974-75	116	245	2.1	151	1.3
1975-76	159	368	2.3	226	1.4
1976-77	73	165	2.3	112	1.5

DUCKS AND DRAKES, TURKEYS AND GESE

1973-74	12	45	3.6	34	2.7
1974-75	5	17	3.2	11	2.2
1975-76	4	13	3.4	9	2.4
1976-77	6	14	2.5	9	1.6

(a) Includes only establishments slaughtering 100 or more birds of all kinds.

(b) Includes weight of whole birds, pieces and giblets.

(c) Includes broilers, fryers and roasters.

(d) Hens, roosters, etc.

Size Structure of Slaughtering Industry

The trend in poultry slaughtering in recent years has been towards larger establishments. In 1966-67 there were 88 establishments slaughtering 100 or more birds (of all types). Ten establishments killing more than 5 000 birds each a year slaughtered a total of 858 000 birds. By 1976-77 however, there were only 20 establishments killing 100 or more birds, four of which slaughtered over 20 000 birds each and a total of 2 493 000 birds. The dressed carcass weight of birds produced in those establishments slaughtering over 20 000 birds was 3 122 000 kg; for all establishments in the following table, the total was 3 181 000 kg. In 1966-67 the over 20 000 birds size group accounted for 87.0 per cent of the number of birds slaughtered and in 1976-77, 98.5 per cent.

The following table classifies poultry slaughtering establishments according to the number of birds slaughtered for establishments slaughtering 100 or more birds of all types per year:

Number of Poultry Slaughtered According to Size of Establishment, 1976-77

Size of establishment (number of birds slaughtered) (a)	Number of establish- ments	Number of birds slaughtered			Total birds slaughtered	
		Chickens (b)	Other fowls (c)	Ducks and drakes, turkeys and geese	Number	Proportion of total
		'000	'000	'000	'000	per cent
100- 500.....	8	1	1	—	1	0.1
501- 5 000.....	5	5	4	—	9	0.4
5 001-20 000.....	3	6	23	—	28	1.1
Over 20 000.....	4	2 442	45	6	2 493	98.5
Total.....	20	2 453	73	6	2 532	100.0

(a) Classified according to number of birds of all kinds slaughtered.

(b) Includes broilers, fryers and roasters.

(c) Hens, roosters, etc.

TECHNICAL ASPECTS OF AGRICULTURAL INDUSTRY

Area of Land Irrigated

Introduction

In 1976-77 there were only 22 263 hectares of land irrigated in Tasmania. Owing to the generally reliable rainfall in the State, scarcity of water is not such a problem as it is in the other Australian states, although quite a number of streams are not permanently flowing and drought conditions in some areas of Tasmania are not unknown.

Area Irrigated

A total of 1 126 farms reported the use of irrigation in 1976-77, a decrease on the number during 1975-76 (1 550). Details of the area of crops and pastures irrigated in Tasmania in recent years are shown in the following table:

**Area of Crops and Pasture Irrigated
(Hectares)**

Year	Crops (a)				Pasture	Total
	Fruit	Potatoes	Other vegetables	Other crops		
1971-72.....	2 993	2 253	2 792	1 868	9 951	19 857
1972-73.....	3 301	2 313	4 841	2 641	14 551	27 647
1973-74.....	3 014	2 167	3 702	1 704	12 789	23 376
1974-75.....	2 605	3 105	4 271	1 582	12 123	23 686
1975-76.....	2 158	2 720	4 627	1 729	11 071	22 305
1976-77.....	1 944	2 938	4 955	1 963	10 463	22 263

(a) Excludes pasture crops which are included with 'Pasture'.

Irrigation Methods and Sources of Water

The main method of irrigation is by 'spray' which accounted for 73.5 per cent of the total area irrigated in 1976-77. The following table gives details of the areas of crops, etc. irrigated and the methods of irrigation used:

Methods of Irrigation, 1976-77
(Hectares)

Crop or pasture irrigated	Method				Total
	Spray	Furrows	Flood	Other and multiple methods (a)	
Crop—					
Potatoes	2 879	5	2	52	2 938
Other vegetables	4 887	9	—	59	4 955
Fruit	1 670	30	55	189	1 944
Other (b)	1 658	122	148	35	1 963
Pasture (incl. lucerne)	5 277	491	4 547	148	10 463
Total	16 371	657	4 752	483	22 263

(a) Includes 168 hectares of fruit watered by the 'trickle' method of irrigation.

(b) Excludes pastures harvested.

Potatoes respond particularly well to irrigation. For the 1976-77 season the State average potato yield from irrigated areas was 33.4 tonnes per hectare while for non-irrigated potato crops the yield was only 18.5 tonnes per hectare. The next table highlights the importance of irrigation in the potato growing industry:

Potatoes Irrigated

Particulars	1966-67	1973-74	1974-75	1975-76	1976-77
Total area of potatoes planted (hectares)	4 159	3 127	4 143	3 354	3 705
Area irrigated—					
Total	1 659	2 166	3 105	2 720	2 938
As proportion of area planted (per cent)	39.9	69.3	74.9	81.1	79.3

Irrigation Schemes*Cressy-Longford Irrigation Scheme*

The State's first major irrigation system was officially opened in 1974. Situated some 30 km south of Launceston, between Cressy and Longford, the Irrigation District covers about 9 000 ha of some of the oldest and most intensively farmed areas in the State.

The source of supply is the tailrace of the Poatina Power Station from which 12 000 megalitres may be diverted annually for irrigation. Water is supplied under gravity to each farm in the constituted Irrigation District through an earthen channel system some 85 km in length. The scheme is administered and operated by the Rivers and Water Supply Commission.

Some 4 500 ha can be watered by gravity from the channel system and are suitable for irrigation by flood, furrow or sprinkler methods. In addition, there are about 2 000 ha above the channel system which could be conveniently irrigated by pumping. A further 2 500 ha outside the boundary of the Irrigation District could be supplied either by pumping or gravity. There are 64 separate holdings within the constituted Irrigation District but at least another 30 holdings outside the District could be supplied from the scheme. Water from the scheme can also be discharged into the Liffey River below Bracknell and by this means at least another 20 riparian holdings within the Liffey River Augmented Flow District can be supplied.

Each piece of land within the Irrigation District is given an 'Irrigation Right' which is an annual entitlement to a certain quantity of water. The total water allocation as Irrigation Rights within the Irrigation District in 1977 was approximately 6 300 megalitres or 97 megalitres per holding. The average size of holdings was 140 hectares. Water charges within

the Irrigation District for the 1976-77 season were : \$5 per megalitre for Irrigation Rights plus \$3 per megalitre for each megalitre of water used. The charge to irrigators outside the Irrigation District was \$10 per megalitre. The Hydro-Electric Commission charges the scheme \$1.30 per megalitre of water used by the irrigators.

Irrigation water used during the 1976-77 season amounted to 2 169 megalitres. The total area irrigated was 1 429 hectares, the main crops irrigated being: pasture, 872 ha; green peas, 260 ha; oats, 84 ha; barley, 65 ha; and oil poppies, 29 ha. Under full development 3 000-4 000 hectares could be irrigated annually.

Togari Water Supply

This scheme was originally administered by the Tasmanian Closer Settlement Board but authority to administer it was vested in the Rivers and Water Supply Commission in May, 1974. It is designed purely as a stock and dairy watering system for 44 dairy properties at Togari in the Circular Head Municipality.

Tasmanian Herd Improvement Organisation

In accordance with the *Herd Improvement Act, 1977*, the Artificial Breeding Board was replaced by the Tasmanian Herd Improvement Organisation in July 1977. This new Organisation took over the provision and promotion of herd improvement services, including both artificial breeding and herd recording.

In Tasmania most artificial breeding activities are undertaken by the Tasmanian Herd Improvement Organisation which operates a Semen Production Centre at Hadspen Park and seven artificial insemination centres throughout the State. Some artificial insemination services are provided by private organisations. Over 75 per cent of inseminations in Tasmania are carried out with semen produced at Hadspen Park.

Because artificial breeding allows extensive use of superior bulls it has been used as an effective tool for herd improvement. Since 1964 the Tasmanian Herd Improvement Organisation has carried out dairy bull proving programs in which genetically superior bulls are selected on the performance of their female progeny in test mated herds and are then used extensively over large numbers of the State's dairy cows. It has been estimated that these programs have achieved a 1 per cent annual genetic gain in the State dairy herd. Owing to different management practices, artificial breeding has not been used so extensively in beef herds.

The following table gives details of activities of the Tasmanian Herd Improvement Organisation (previously the Artificial Breeding Board) in recent years:

Artificial Breeding: Services and Inseminations
(Source: Tasmanian Herd Improvement Organisation)

Year	Cows served (a)	Total Inseminations	Non-return rate for commercial service (b) (per cent)
1964-65	23 884	36 847	62.5
1969-70	49 818	70 350	70.2
1972-73	59 215	81 760	70.7
1973-74	57 751	69 728	72.6
1974-75	52 058	56 763	74.5
1975-76	r 42 791	r 56 655	n.a.
1976-77	26 945	35 656	n.a.

(a) Includes cows which have undergone infertility service, however numbers are negligible from 1968-69.

(b) Percentage of cows not returning for further service within 90-120 days following first service.

Artificial Fertilisers

Types of Artificial Fertiliser

The basic types of artificial fertiliser employed are phosphatic (e.g. superphosphate), nitrogenous (e.g. sulphate of ammonia) and potassic (e.g. muriate of potash), their essential

chemical contribution to plant nutrition being phosphoric oxide (P_2O_5), nitrogen (N) and potassium oxide (K_2O). Superphosphate, either 'straight' or with additives, is most widely used in Tasmania, the additives consisting of trace elements such as cobalt, molybdenum, copper, boron, zinc, etc. In addition to the basic fertiliser types, various combinations are also used. Due to the numerous fertiliser combinations on the market it has not been possible to obtain any detailed analysis of the types applied for various purposes.

Usage

The quantity of artificial fertilisers used in recent years on Tasmanian farms has dropped markedly. The removal of the government bounty on superphosphate in December 1974, a substantial increase in its price and the need to reduce costs because of low prices for many farm products all contributed to a sharp drop in usage. For 1976-77, the quantity used has shown a partial recovery and further increased usage is expected following the reintroduction of the bounty from July 1977.

Changes in government policy on bounties for the use of superphosphate have caused considerable interest in the extent of the concentration of usage. The following table shows the distribution of usage of artificial fertilisers (excluding straight nitrogenous types) according to quantity used on holdings.

The table shows that holdings using over 50 tonnes accounted for 40.3 per cent of the quantity used in 1976-77 but represented only 7.6 per cent of the total number of holdings that used artificial fertiliser (other than straight nitrogenous types).

**Rural Holdings Classified According to the Quantity of Artificial Fertiliser
(Other than Straight Nitrogenous Types) Used, 1976-77**

Particulars	Size category (tonnes used)			
	Up to 10	Over 10 and up to 50	Over 50	Total
Number of holdings	2 037	1 926	326	4 289
Percentage (a)	47.5	44.9	7.6	100.0
Quantity used (tonnes)	9 260	40 081	33 301	82 642
Percentage (c)	11.2	48.5	40.3	100.0

(a) Of total holdings using fertilisers.

(b) Comprises 61 233 tonnes of superphosphate (including superphosphate with trace elements) and 21 409 tonnes of other types and mixtures.

(c) Of total fertiliser used.

The following table shows the amount of artificial fertiliser used, by the type of crop, for recent years:

Artificial Fertilisers Used

Particulars	Unit	1966-67	1973-74	1974-75	1975-76	1976-77
Vegetables (a)—						
Area fertilised	hectares	11 628	8 780	10 054	9 911	11 040
Fertiliser used—Total	tonnes	9 164	7 834	9 719	9 157	10 572
Per hectare	tonnes	0.79	0.89	0.97	0.92	0.96
Fruit—						
Area fertilised	hectares	8 492	4 577	3 346	3 017	2 963
Fertiliser used—Total	tonnes	7 482	4 505	3 073	2 737	2 743
Per hectare	tonnes	0.88	0.98	0.92	0.91	0.93
Other crops (b)—						
Area fertilised	hectares	73 542	42 158	35 521	32 213	35 589
Fertiliser used—Total	tonnes	19 311	11 678	9 679	9 229	10 738
Per hectare	tonnes	0.26	0.28	0.27	0.29	0.30

Artificial Fertilisers Used—continued

Particulars	Unit	1966-67	1973-74	1974-75	1975-76	1976-77
Pastures (b)—						
Area fertilised	hectares	642 593	724 104	510 594	244 284	343 171
Fertiliser used—Total	tonnes	136 523	156 293	102 390	44 386	60 571
Per hectare	tonnes	0.21	0.22	0.20	0.18	0.18
Total usage—						
Area fertilised	hectares	736 255	779 619	559 515	289 425	392 763
Fertiliser used	tonnes	172 480	180 310	124 861	65 509	84 624

(a) Vegetables for human consumption only.

(b) 'Pastures' includes lucerne from 1971-72 but lucerne is included in 'Other crops' for earlier years.

ECONOMIC STATISTICS: AGRICULTURE

It is now possible to produce economic statistics for agriculture on a compatible basis with those produced for the mining, manufacturing, retailing and other sectors of the economy (see the section 'Economic Censuses and Surveys' in Chapter 18). This results from basing the Agricultural Finance Survey (a recently introduced economic sample survey) on the new register of agricultural businesses which was established in 1974-75.

The population identified as the basic framework for the 1974-75 and subsequent Agricultural Finance Surveys consisted of all agricultural *enterprises*, i.e. all enterprises classified to an industry within sub-division 01, Agriculture, of the Australian Standard Industrial Classification (ASIC). This contrasts with the framework used for surveys prior to 1974-75 when the survey population consisted of all agricultural *holdings* (see definition earlier in this Chapter).

The coverage of the 1974-75 and subsequent surveys consists of a randomly selected sample of enterprises which fall within the scope of the survey. In earlier surveys, financial data relating to agricultural activity only were collected but, from 1974-75, data connected with any non-agricultural activity of an agricultural enterprise (such as agricultural services, retailing, transport, etc.) were collected in addition to data about its agricultural activities. Any enterprise which was predominantly engaged in non-agricultural activity was out of scope of the survey.

The main items of interest from the survey for the years 1974-75 to 1976-77 are contained in the following table. Further details and an explanation of the terms used (in addition to those in Chapter 18 of this publication) can be found in the Canberra Office of the Bureau publication 'Agricultural Sector—Part IV Financial Statistics' (Ref. No. 7507.0).

Financial Statistics, Agricultural Enterprises (a)
(\$ million)

Item (b)	1974-75	1975-76	1976-77 _p
Sales from crops	33.0	27.8	30.2
Sales from livestock	44.4	36.6	42.5
Sales from livestock products	50.5	52.5	54.7
Turnover	136.2	119.6	133.3
Purchases and selected expenses	71.3	63.2	63.5
Value added	67.9	58.0	69.0
Adjusted value added	59.1	48.9	60.3
Gross operating surplus	40.2	28.1	45.2
Cash operating surplus	30.3	16.3	37.5
Total net capital expenditure	16.8	17.5	16.2
Gross indebtedness	105.8	108.0	83.0

(a) These figures are estimates based on a sample and are therefore subject to possible inaccuracies. 'Standard errors' indicating the reliability of each item are included in the Canberra Office of the Bureau publication 'Agricultural Sector, Part IV, Financial Statistics' (Cat. No. 7507.0).

(b) See the section 'Economic Censuses and Surveys' in Chapter 18 for definitions.

The only other economic statistics relating to the agricultural industry are the 'Value of Production' series which have now been substantially reduced in scope following the introduction of the annual surveys. There are basic differences in the two series of statistics and an explanation of these differences and definitions of the terms used for 'Value of Production' purposes are contained in the Appendix to Chapter 8.

TASMANIAN DEPARTMENT OF AGRICULTURE

Aims and Structure

The Department of Agriculture was established in its present form in 1927 with the aim of 'spreading scientific knowledge among primary producers'. The functions of the modern Department are broadly three-fold: regulatory; extension (advisory); and research.

The regulatory function involves the administration of State legislation governing the production and marketing of farm produce. It includes a responsibility for policy development and a continuing review of relevant acts and regulations. The Department's specialist officers report on the Tasmanian agricultural situation and prospects to industry committees, government commissions and parliamentary inquiries.

In the extension area, the Department provides information and advice to encourage the adoption of practices that can contribute to more efficient agriculture. Extension officers advise farmers on all agricultural matters of concern to the rural community.

Research is undertaken to improve the performance and health of animals and plants of agricultural significance.

The Department is headed by a Director, assisted by a Deputy Director. It has seven divisions, each headed by a chief—Animal Health, Animal Production, Plant Pathology, Entomology, Plant Production, Extension and Administration, and two resource sections—Economics and Information. It has its Head Office in Hobart and a subsidiary office in each of 15 districts that cover the whole State including the Bass Strait islands. It has two research centres with laboratories (at Hobart and Launceston) and five research stations with land for field experiments in different parts of the State.

Total expenditure by the Department of Agriculture from Consolidated Revenue in 1976-77 was \$9.25 million compared with \$8.40 million in 1975-76. These figures include the expenditure of the Sea Fisheries Division which has since been separated from the Department to form the basis of the new Fisheries Development Authority.

GOVERNMENT FINANCIAL ASSISTANCE TO RURAL PRODUCERS

The Agricultural Bank of Tasmania

The State Advances Act

In 1907 the Government of the day passed the *State Advances Act* to set up the Agricultural Bank of Tasmania for the purpose of providing financial assistance to a limited section of the rural community.

Just prior to the legislation being enacted, a considerable amount of indiscriminate selection of Crown land had taken place. Most of the settlers had used what small resources they had on development. The location of their holdings and the nature of their proposals were such that normal financial institutions were not interested in providing the further finance required. It was to help these settlers that the Bank was established.

Over the years the legislation was widened and today loans are made to persons engaged in rural industries, irrespective of the nature of the tenure of their holdings, for many of their requirements. Finance is most frequently requested for: the purchase of farm properties; refinancing of mortgages; the purchase of livestock, plant and equipment; land development; structural improvements; and land irrigation. Loans are also made to professional fishermen. During the year ended 30 June 1977, loans totalling \$3.75m were approved for these purposes. Loans outstanding at 30 June 1977 totalled \$11.97m.

Special Relief

It has been the practice of governments to channel assistance to rural industries through

the Agricultural Bank and over the years more than 30 items of rural legislation have been administered. Some have been in respect of State Government assistance only and others in respect of joint assistance by State and Federal Governments. Much of this legislation has been directed at alleviating conditions of hardship following droughts, fires, floods and market downturns. There are still liabilities from borrowers in respect of these areas but no new loans are currently being advanced. The amount outstanding at 30 June 1977 in respect of loans advanced under the *Primary Producers Relief Act (No. 2) 1947*, the *Flood Relief Act 1960*, the *Primary Producers Relief Acts 1968, 1970 and 1971*, and the *Fire Damage Relief Act 1967* was \$1.30m.

Other Rural Activities of the Bank

In addition to the provision of loans under the *State Advances Act*, the Agricultural Bank also currently provides assistance under the *War Service Land Settlement Act 1950*, the *Closer Settlement Act 1957*, and the *Rural Adjustment Act 1977*. The purposes and provisions of these Acts are briefly outlined in the following sections.

Closer Settlement Scheme

Under this scheme the Agricultural Bank may, under certain conditions, acquire freehold land; it can appropriate Crown land and it can purchase land by negotiation. Land so obtained may be developed into farms for allotment to eligible persons. Developed or partly developed farms may also be purchased and allotted and available funds have been directed to this end in recent years.

Properties are made available on a 99-year lease with an option to purchase the freehold. Persons obtaining properties may receive loans to enable them to carry on farming operations. Currently, only token funds are available and during the year ended 30 June 1977 only four properties were purchased and allotted.

War Service Land Settlement

In 1944-45 the Federal and State Governments reached agreement on a scheme for the settlement of ex-servicemen on farming properties. Large areas of land were investigated and subsequently over 180 000 hectares were purchased for development and allotment to eligible ex-servicemen. All holdings have been allotted as grants in perpetuity at a pre-determined rental. After a period of six years a settler may, subject to conditions laid down in the Act, exercise a right to convert the property to a freehold title by payment of an option price determined at the time of allotment, or he may transfer his interest in the holding to a person not entitled to receive an allotment under the Scheme.

At 30 June 1977, 197 properties developed under this scheme were occupied by the original settlers, a further 75 settlers had exercised their option to purchase the freehold on their properties, and 207 properties had been re-allocated or were occupied by other than eligible ex-servicemen.

Rural Reconstruction

On 4 June 1971 an agreement was signed between the Federal Government and the State of Tasmania, the object being the implementation of a national scheme of rural reconstruction; in essence, the Federal Government provides the financial assistance but the detailed administration is vested in the State. Similar federal-state agreements were entered into by the other Australian states on the same date. In October 1971 the Tasmanian Parliament passed the *Rural Reconstruction Act 1971* which established the mechanism for administering the scheme in Tasmania.

As from 1 January, 1977 a further agreement between the Commonwealth and State Governments provided for a Rural Adjustment Scheme.

The Agreement combines into one comprehensive scheme the various forms of rural adjustment which previously had been provided under separate legislation, namely the *Rural Reconstruction Act 1971*, *Dairy Adjustment Program Act 1975* and the *Beef Industry Assistance Act 1975*. The legislation also provided for the following new measures:

- (i) Household support for farmers on uneconomic properties while they consider whether or not to move out of farming.

- (ii) Advances for farm development to restore uneconomic properties to an economic level.
- (iii) Carry on loans to specified industries affected by market downturn. This assistance relates to the beef and dairy industries.

Debt Reconstruction

This applies to the farmer whose prospects are sound but who is unable to obtain finance to carry on and is thus in danger of losing his property or other assets. The assistance may provide for a re-arrangement of debts to allow more time for payment or for a composition of debts. Advances may be made for the repayment of all or part of the debts and for carry-on expenses, purchase of livestock and property development.

Farm Build-up

The purpose of farm build-up is to encourage the amalgamation of properties which are too small to be economic under current conditions. Finance may be provided to the owner of an uneconomic property to buy adjoining land to build-up his property or to a viable farmer to purchase an adjacent uneconomic farm. When an adjoining property is sold to a farmer a grant may be made at the Board's discretion to cover the value of acquired assets which are not useful to the enlarged property. Advances may be made for carry-on expenses, plant, livestock and development where not available through normal sources.

Farm Improvement

Unlike the assistance provided under the *Dairy Adjustment Program Act*, which was aimed at the restoration of a dairy farm to economic viability by improving the effective use of an existing farm without adding to its area, this assistance is extended to cover the whole farming sector. An applicant must be able to demonstrate that his property has been economic and that the proposed improvements will give sound prospects of economic viability in the long term. Farm improvement assistance may take the form of advances for plant, livestock, carry-on expenses and further property development, either for an expansion of existing production or for diversification to another form of production.

The following table summarises details of approvals under the *Rural Reconstruction Act 1971* to 31 December 1976 and the *Rural Adjustment Act 1977* from 1 January 1977 to 30 June 1977.

Rural Reconstruction and Rural Adjustment

Particulars		Rural Reconstruction		Rural Adjustment
		1.7.76 to 31.12.76	Total to 31.12.76	1.1.77 to 30.6.77
Farm build-up—				
Applications—Considered	no.	17	201	21
Approved	no.	4	110	5
Assistance approved	\$'000	130	2 055	107
Debt reconstruction—				
Applications—Considered	no.	20	465	14
Approved	no.	5	165	4
Assistance approved	\$'000	92	3 089	50
Rehabilitation loans—				
Applications—Considered	no.	3	30	2
Approved	no.	2	23	2
Assistance approved	\$'000	6	62	8
Carry-on (beef)—				
Application—Considered	no.	21	104	6
Approved	no.	9	54	2
Assistance approved	\$'000	46	284	10

Fruitgrowing Reconstruction Scheme (Tree Removal)

Serious economic problems confronting the Australian fruit industry led to the establishment in 1972, by the Federal Government, of a scheme to assist reconstruction of the fruit industry. In Tasmania the scheme applied only to apple or pear growers in serious financial difficulties. The Tasmanian *Fruitgrowing Industry Reconstruction Act 1972* authorised implementation of the Federal-State Fruitgrowing Reconstruction Agreement.

Total financial assistance provided under the scheme to all states by the Federal Government was limited to \$4.6m. Administrative expenses incurred are borne by the states.

Eligible Fruitgrowers

Growers involved in the apple or pear industry in Tasmania could apply for assistance if the Rural Reconstruction Board was satisfied that the number of trees which the grower had, constituted a commercial operation and either the grower: (i) was predominantly a horticulturist in severe financial difficulties and intended to remove all of his trees and leave the apple or pear industry; or (ii) did not have adequate resources to withstand the short-term economic effects of removal of surplus trees, but in the opinion of the Board his farm enterprise had sound long-term prospects after tree removal and putting the released land to an alternative use. The Scheme (which commenced operation in 1972) was originally due to expire on 30 June 1973. There were subsequent extensions and the expiry date for applications was extended to 31 December 1976 with all trees to be removed by 31 August 1977 in order to qualify for compensation.

Type of Assistance

Assistance was based on tree removal and compensation up to a maximum \$864.87 per hectare (\$350 per acre) for growers of fresh apples and pears with an overall average of not more than \$617.76 per hectare (\$250 per acre) payable for approved tree removals.

Growers who received compensation and remained on their holdings had to undertake not to re-plant apple or pear trees on their properties within a period of five years. To ensure compliance, compensation was provided in the form of an interest bearing loan—if the grower observed the undertaking not to replant, the interest was rebatable and loans were to be converted to non-repayable grants at the end of the required five-year period.

At the end of June 1977 the following progress had been made: (i) applications received for (a) partial removal, 498; (b) complete removal, 412; (ii) assistance approved for (a) partial removal, \$1.35m; (b) complete removal, \$1.03m; (c) total approvals, \$2.38m; (iii) total area of trees approved for removal, 3 810 hectares. The area known to have been removed under the scheme as at 30 June 1977 was 3 253 hectares of orchard.

Further References

ABS Publications Produced by the Tasmanian Office

- Agricultural Industry, Tasmania (7101.6) (annual; 1976-77 issue released 6-7-78)
- Agricultural Statistics Preliminary, Tasmania (7102.6) (annual; 1977-78 released 30-6-78)
- Livestock Statistics (Preliminary) Tasmania (7201.6) (annual; 1977-78 released 26-5-78)
- Livestock Statistics (Final) Tasmania (7201.6) (annual; 1976-77 released 12-10-77)
- Production of Meat, Tasmania (7202.6) (annual; 1976-77 released 4-10-77)
- Statistics of the Dairy Industry, Tasmania (7203.6) (annual; 1976-77 released 13-1-78)
- Poultry Statistics, Tasmania (7204.6) (annual; 1976-77 released 8-11-77)
- Wool Production Statistics, Tasmania (7205.6) (annual; 1976-77 released 6-1-78)
- Bee Farming Statistics, Tasmania (7206.6) (annual; 1977-78 released 7-8-78)
- Crop Statistics, Tasmania (7301.6) (annual; 1976-77 released 20-1-78)
- Apples and Pears Held in Cool Stores, Tasmania (7302.6) (monthly, seasonal; August 1978 released 21-9-78)
- Fruit Production, Tasmania (7303.6) (annual; 1976-77 released 11-4-78)
- Potato Statistics, Tasmania (7304.6) (annual; 1976-77 released 24-2-78)
- Hop Production, Tasmania (7305.6) (annual; 1977-78 released 13-7-78)
- Farms, Number of, Irrigation and Fertiliser Usage, Tasmania (7401.6) (annual; 1977 released 6-12-77)
- Value of Agricultural Commodities Produced, Tasmania (7501.6) (annual; 1976-77 released 22-6-78)

ABS Publications Produced by the Canberra Office

- Agricultural Sector, Part I—Structure of Operating Units (7102.0) (annual; 1976-77 issue released 2-2-78)
- Rural Land Use, Improvements, Agricultural Machinery and Labour (7103.0) (annual; 1975-76 released 14-4-77)

- Principal Agricultural Statistics: First estimates (7201.0) (annual; 1977-78 released 13-6-78)
Principal Agricultural Statistics: Second Estimates (7202.0) (annual; 1976-77 released 29-6-77)
Livestock Statistics (7203.0) (annual; March 1977 released 6-12-77)
Meat Statistics (7204.0) (monthly; July 1978 released 22-8-78)
Meat Statistics (7205.0) (quarterly; March quarter 1978 released 30-5-78)
Meat Statistics (7206.0) (annual; 1976-77 released 22-3-78)
Chicken Hatchings and Poultry Slaughterings (7207.0) (monthly; June 1978 released 5-9-78)
Milk Statistics (7208.0) (monthly; June 1978 released 1-9-78)
Dairying and Dairy Products (7209.0) (annual; 1976-77 released 8-5-78)
Wool Production and Shearing (Provisional Estimates) (7210.0) (annual; 1978-79 released 26-7-78)
Sheep Numbers, Shearing and Wool Production Forecast (7211.0) (annual; 1977-78 released 19-12-77)
Wool Statistics (7212.0) (annual; 1976-77 released 21-6-78)
Beekeeping (7214.0) (annual; 1976-77 released 13-1-78)
Crop and Fruit Statistics (Preliminary) (7301.0) (annual; 1976-77 released 23-9-77)
Crop Statistics (7302.0) (annual; 1976-77 released 6-6-78)
Fruit Statistics (7303.0) (annual; 1976-77 released 21-6-78)
Cereal Grains: Estimates of Intended Sowings (7304.0) (annual; 1978-79 released 26-6-78)
Principal Cereal Grains: Estimates of Area Sown (7305.0) (annual; 1977-78 released 13-10-77)
Principal Cereal Grains: Estimates of Wheat Production (7306.0) (annual; 1977-78 released 9-12-77)
Wheat Statistics (7307.0) (annual; 1976-77 released 9-6-78)
Mushroom Statistics (7308.0) (annual; 1976-77 released 14-12-77)
Nursery and Flower Statistics (7309.0) (annual; 1974-75 released 8-2-77)
Gross Value of Primary Commodities Produced (excluding Mining), First Estimates (7501.0) (annual; 1977-78 released 4-7-78)
Value of Agricultural Commodities Produced and Indexes of Quantum and Unit Gross Value of Agricultural Production (7503.0) (annual; 1976-77 released 4-8-78)
Agricultural Sector Part IV—Financial Statistics (7507.0) (annual; 1975-76 and 1976-77 released 6-9-78)
Agricultural Sector Part IV—Financial Statistics (Preliminary) (7508.0) (annual; 1976-77 released 11-5-78)

Chapter 8

FORESTRY, MINING AND FISHERIES

FORESTRY

Introduction

When the first explorers ventured beyond the main coastal areas of mainland Australia, they encountered arid zones and desert nearly devoid of timber. By contrast, in Tasmania dense and continuous forest was the main barrier to early penetration, although the early settlements were sited in open savanna-like country which originated from firing by the Tasmanian natives. No other Australian state has similar widespread conditions favourable for forest growth: a cool temperate climate; an assured annual rainfall varying from 500 to 3 800 millimetres according to locality, and showing relatively small seasonal variation.

During the period since the first settlement in 1803, land clearing, timber exploitation and fires have left their mark; however the Forestry Commission estimates that the current total forest area (including some forest of little or no commercial value) is 2 802 000 hectares (i.e. about 40 per cent of the State's total area of 68 300 sq km).

Forest Area

Of all the Australian states, Tasmania is unique in its concentration of forest resources. Native forests of potentially commercial quality cover 2 124 000 hectares (or 31 per cent of the State's area). Of this area 909 000 hectares are privately owned and 1 215 000 hectares are Crown owned forest.

The need for permanent reservation of land for timber production was first officially recognised by the *Waste Lands Act* 1881 and the first forest reservation occurred in the late 1880s when some 21 270 hectares were gazetted. Reservations had reached 403 660 hectares by 1910 and 651 890 hectares at the time of World War II. An on-going program of dedication of suitable lands as State forests in perpetuity is a firm undertaking in the Commission's policy. The gazetted area at 30 June 1977 was 1 474 800 hectares towards a target of 1 618 000 hectares of permanent State-owned forests managed for the benefit, both material and environmental, of future generations. In addition to the State forests there are 'timber reserves' (land reserved for the supply of timber, including fuel); at 30 June 1977 the area of timber reserves was 129 000 hectares.

The State forests are located, in the main, in five distinct regions: (i) far north-west about the axis of the Arthur River; (ii) north-eastern highlands; (iii) north and north-west of the Great Lake; (iv) from the south coast, north to Lake King William; and (v) the east coast area.

Classification of State Forests and Timber Reserves

A classification of State forests, timber reserves and land acquired for forestry purposes is set out in the following table:

Classification of State Forests and Timber Reserves at 30 June 1977
(^{'000 Hectares})

Forest type	Area
Eucalypt forest with a mature or potential mature height over 41 m	372
Eucalypt forest with a mature or potential mature height of 15 m to 41 m	705
Temperate rain forest (<i>N. cunninghamii</i>) and associated species	166
Plantations (mainly <i>P. radiata</i>)	29
Total forest area	1 272
Non-productive forests and other land included for protection purposes	332
Total	(a) 1 604

(a) Comprised: State forest, 1 475 000 hectares (gazetted State forest only); timber reserves, 129 000 hectares.

Timber Concession and Reserve Areas

The establishment in Tasmania of various industries using forest resources has given rise to the need for some guarantee of assured timber supplies to those industries. Therefore, certain concessions and cutting rights on Crown lands have been awarded to companies relying on forest products as their raw materials. The map on the following page shows the location of concession and reserve areas in Tasmania. Concession areas are those areas where a company is at present allowed to operate while reserve areas are set aside for future use. Providing that the company meets certain stipulated conditions, permission to remove timber from the reserve area will be granted by the Forestry Commission. The total area of Crown land under pulpwood concessions and exclusive forest permits at 30 June 1977 was 1 957 000 hectares.

Plantations

The scarcity of native softwoods is being met, in part, by the creation of exotic plantations, the principal species grown being *Pinus radiata*, but at 30 June 1977 the softwoods plantations (43 000 hectares) accounted for only 1.5 per cent of the State's total forested area. The Forestry Commission had established almost 29 000 hectares of softwood plantations in Tasmania by 30 June 1977.









The following table shows the area of softwood and hardwood plantations established by the Forestry Commission (but excludes privately owned areas):

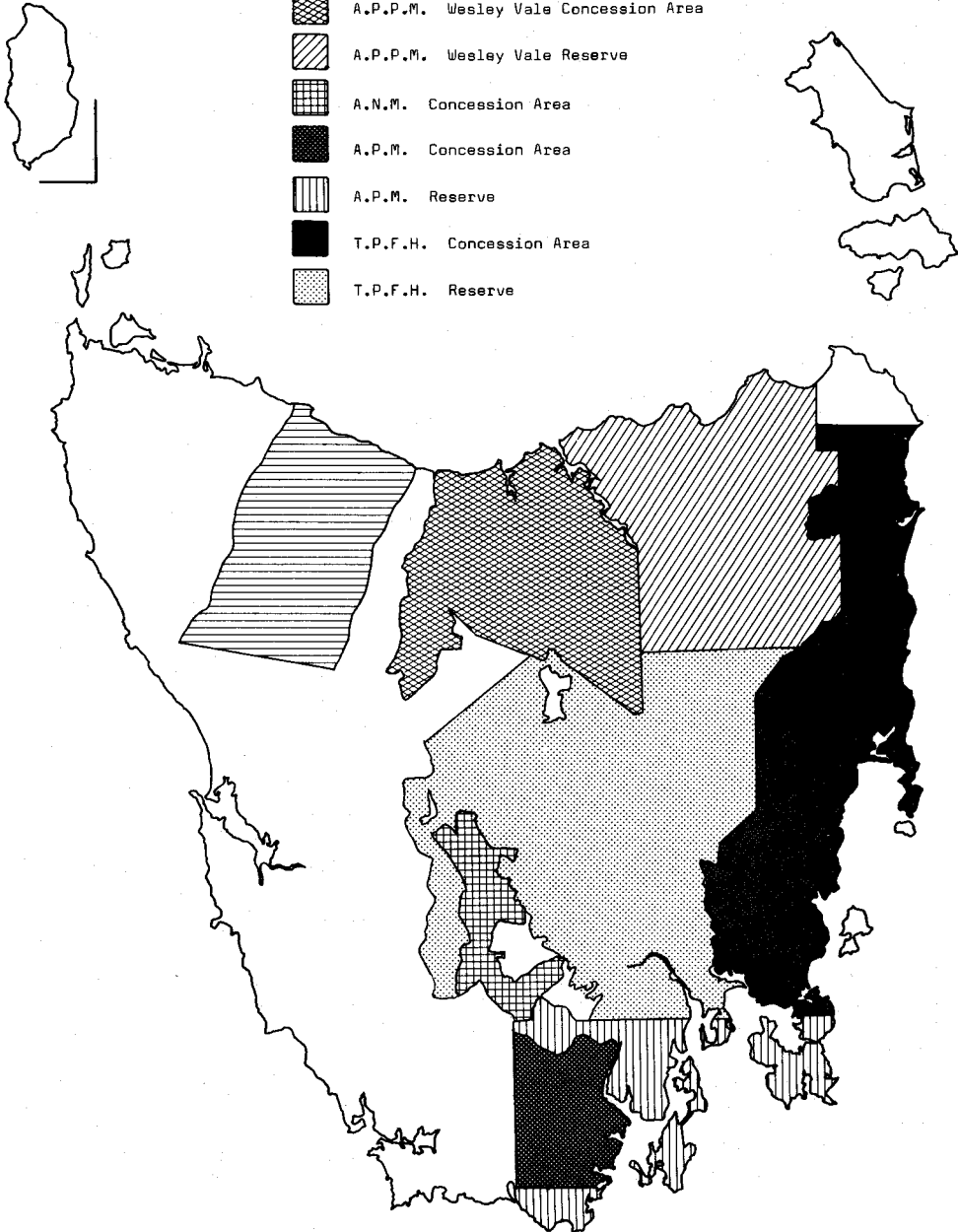
Area of Forestry Commission Plantations at 30 June
(Hectares)

District	1976			1977		
	Softwood	Hardwood	Total	Softwood	Hardwood	Total
Circular Head	—	9	9	—	9	9
Burnie	2 650	3	2 653	2 720	3	2 723
Devonport	4 866	333	5 199	5 401	333	5 734
Queenstown	1 355	—	1 355	1 640	—	1 640
Launceston	727	1	728	769	1	770
Scottsdale	7 400	2	7 402	7 765	2	7 767
Fingal	9 772	2	9 774	10 358	2	10 360
Dover	86	—	86	86	—	86
Triabunna	—	92	92	—	92	92
Geeveston	—	16	16	—	16	16
Total	26 856	458	27 314	28 739	458	29 197

In May 1974, following the calling of tenders for cutting rights in *Pinus radiata* plantations in the north-east of Tasmania, a substantial sale of sawlogs was made and resulted in the establishment of a milling complex near Scottsdale. However, since that time the operating Company has experienced initial difficulty, resulting in a request for Government aid to sustain the operation. Production was halted following the destruction by fire of the 'green mill' in February 1978, but construction of a replacement mill has commenced and should be completed by late 1978.

TIMBER CONCESSION AREAS

-  A.P.P.M. Burnie Concession Area
-  A.P.P.M. Wesley Vale Concession Area
-  A.P.P.M. Wesley Vale Reserve
-  A.N.M. Concession Area
-  A.P.M. Concession Area
-  A.P.M. Reserve
-  T.P.F.H. Concession Area
-  T.P.F.H. Reserve



Tasmanian Forest Types

The better quality forests largely occur where the annual rainfall exceeds 760 mm, but soil quality and the frequency of past fires also influence distribution. This productive native forest estate consists of four main vegetation types: dry sclerophyll; open; wet sclerophyll; and temperate rain forests. The rain forest is principally located in the western half and to a lesser extent in the north-east highlands; the other three types (eucalypt forest) predominate elsewhere. The rain forest is characterised by the dominance of *Nothofagus cunninghamii* (myrtle), *Atherosperma moschatum* (sassafras), *Eucryphia lucida* (leatherwood) and other trees which appear on poorer soils. *Acacia melanoxylon* (blackwood) grows where rain forest has been disturbed in the past; principally where fires have occurred.

Eucalypt forests of good quality are not common on soils of reasonable depth and fertility where the annual rainfall is below 760 mm. Where the rainfall is above 1 130 mm, rain forest species appear in the understorey but are excluded should fires occur, say, every 40 to 50 years. With rainfall above 1 520 mm rain forests can exclude eucalypts. However, even with rainfall well above 1 520 mm a combination of poor soils and frequent burning produces areas of button grass and heathy plains.

Tasmanian forests are cut almost exclusively for hardwood (eucalypts), the slow growing native softwoods never having been very plentiful. The principal softwood species which have been utilised are *Athrotaxis selaginoides* (king billy pine), *Dacrydium franklinii* (huon pine) and *Phyllocladus aspleniifolius* (celery-top pine).

Hardwoods: The most valuable eucalypts are those which belong to the so-called ash group—*E. obliqua* (stringy-bark), *E. delegatensis* (gum-top stringy-bark or alpine ash) and *E. regnans* (swamp gum or mountain ash). In the south and south-east *E. Globulus* (Tasmanian blue gum) occurs in high quality forests. In areas where the annual rainfall is below 760 mm, the more important eucalypts are *E. amygdalina* (black peppermint), *E. ovata* (swamp or black gum), *E. viminalis* (white gum), *E. obliqua* (stringy-bark) and *E. linearis* (white peppermint).

Tasmania offers 11 tree types suitable for chipping, of which 10 are eucalypts. The eleventh is the myrtle (*Nothofagus cunninghamii*), a rain forest hardwood available in the north-west of the island. The eucalypts can be graded into:

- | | |
|--|---|
| (i) First quality (four species)— | <i>E. obliqua</i> (stringy-bark) (a) (b) |
| | <i>E. delegatensis</i> (gum-top stringy-bark) (a) (b) |
| | <i>E. regnans</i> (swamp gum) (b) |
| | <i>E. sieberi</i> (ironbark) |
| (ii) Second quality (three 'gums')— | <i>E. viminalis</i> (white gum) (a) (b) |
| | <i>E. globulus</i> (blue gum) (a) |
| | <i>E. ovata</i> (swamp or black gum) (b) |
| (iii) Third quality (three 'peppermints')— | <i>E. amygdalina</i> (black peppermint) (a) (b) |
| | <i>E. linearis</i> (white peppermint) |
| | <i>E. tasmanica</i> (silver peppermint) |

Two species of eucalypt—*E. delegatensis* and *E. obliqua* account for over 60 per cent of all eucalypt logs cut for woodchipping. The east coast offers all 10 varieties of which the five marked (a) are the common ones. The north coast offers, in useful quantity, only the six varieties marked (b).

Softwoods: Although Tasmania's native forests produce some very valuable softwood timber, these are very slow growing and in short supply. For this and other reasons, attention has been given to building up another section of the total forest estate—namely, plantations of exotic species, particularly *Pinus radiata*. At mid-1977 there were almost 29 000 hectares of State owned pine plantations with another 14 000 hectares on private land.

Forest Utilisation

Introduction

An extensive sawmilling industry has been a major and traditional part of the Tasmanian scene since the mid 19th century. This was originally an industry solely reliant on native

forests for its raw material, although now (and in the future) plantations of exotic softwoods play an important role in supplying the industry. For a number of years usage of logs for sawing, peeling and slicing remained at over 1 000 000 cubic metres per annum but usage has dropped since 1974-75 to a level of 986 000 cubic metres in 1976-77, when 368 000 cubic metres of sawn, peeled or sliced timber was produced.

However, typical native forests produce much wood not suitable for sawmilling and in 1937 a start was made on the use of this previously wasted resource for the manufacture of paper at Burnie. Since that time, the use of pulpwood has expanded, particularly in the present decade, producing pulp paper, building panel-boards and raw woodchips. In 1941 the only newsprint mill in Australia was established at Boyer on the Derwent; more recently, in 1962, a pulp mill began operations at Port Huon in the south. A further pulp and paper mill commenced production during 1970 at Wesley Vale near Devonport. Further utilisation of forestry products has been introduced by factories producing plywood, hardboard, particle board and woodchips (for export).

Establishment of the woodchip industry and the expansion of other timber-using industries has resulted in greatly increased annual timber requirements necessitating careful utilisation of existing forest resources and the development of viable reafforestation schemes.

The problem of possible overtaxing of existing resources has been met partly by the implementation of fully integrated forest operations wherever possible. These operations ensure maximum use of the resource, with the best logs going to sawlogs and the remaining merchantable timber being processed as pulpwood. This also facilitates regeneration of the forest as most of the standing trees are removed, hence decreasing competition for available nutrients and light.

Pulpwood is also obtained from waste produced during sawmilling. During 1969-70, the year preceding the first export of woodchips, approximately 25 per cent of sawmill waste was chipped for re-use. As a direct consequence of the woodchip export trade the proportion rose to over 60 per cent in 1976-77.

Thinnings from Forestry Commission *Pinus radiata* plantations are used for sawlogs and, at Wesley Vale, for particle board manufacture and for making ground woodpulp used in paper manufacture. Future sales of thinnings to other pulping plants are currently being negotiated.

Regeneration is carried out by the Forestry Commission and by the companies themselves. On Crown land reafforestation is mandatory, the work in some areas being done by the companies and in other areas by the Forestry Commission. Industries utilising privately owned forest resources have established incentive schemes to encourage reafforestation.

Total Log Usage

The next table shows total log usage by the sawmilling, paper making, chipping and allied industries:

Hardwood and Softwood Log Usage
(⁰⁰⁰ m³)

Year	Sawmilling and plywood milling	Chipping, grind- ing and flaking	Total
1971-72	1 081.09	1 171.37	2 252.46
1972-73	1 096.99	2 133.65	3 230.64
1973-74	1 073.73	2 961.66	4 035.39
1974-75	1 071.27	2 866.34	3 937.61
1975-76	984.54	2 396.09	3 380.63
1976-77	986.44	2 913.18	3 899.62

Timber Using Industries

Normally the Bureau does not publish information relating to any single enterprise or establishment but only publishes statistical aggregates where these do not directly or indirectly reveal the operations of any single informant. However, a description of some of the State's major timber using companies is obviously desirable; therefore, the Forestry Commission has supplied the details given below.

Paper, Hardboard and Particle Board

Associated Pulp and Paper Mills Ltd and subsidiaries manufacture paper at Burnie and particle board and paper at Wesley Vale. Their hardboard mill closed at the end of the 1977-78 financial year after 27 years production, largely due to a significant decrease in demand by the export market and the highly competitive nature of the reconstituted wood panelling industry in Australia. The Company owns 101 172 hectares of forested land and holds cutting rights over Crown land for 24 kilometres on each side of the Emu Bay railway line from the north coast to the Pieman River.

In 1970 the Company completed the first stage of its pulp and paper mill at Wesley Vale at a cost of \$25 million. The first paper machine installed has an annual capacity of 41 000 tonnes of magazine paper and provision has been made for the installation of three additional machines. However, expansion at Wesley Vale has been deferred due to economic conditions and the difficulty of financing the very high capital cost of the project at the present. An alternative expansion project at the Burnie mill has been planned at a cost of approximately \$25 million to produce bleached softwood pulp from Company and Forestry Commission softwood plantations.

Newsprint

Australian Newsprint Mills Ltd situated at Boyer on the Derwent River is Australia's sole manufacturer of newsprint. Its timber concession follows the general line of the Derwent as far north as Lake King William.

The *Florentine Valley Paper Act* 1966 increased A.N.M.'s concession area from 110 479 hectares to 150 948 hectares to provide the basis for an expansion program. The Company is required by the Act to supply 30 100 cubic metres of logs to other timber-using industries each year. The plant ran at almost full capacity during 1976-77 and produced 207 000 tonnes of newsprint. Machinery was installed in 1978 to manufacture a special type of thermo-mechanical pulp from *Pinus radiata* which will partly replace imported Kraft chemical pulp.

Woodpulp

Australian Paper Manufacturers Ltd, manufacture woodpulp at Port Huon on the Huon River. The pulp is shipped in pellet form to the Company's paper mills in other states, principally to Botany, N.S.W. The Company's pulpwood concession and reserve areas include virtually the whole of the D'Entrecasteux Channel coastline and the south coast as far west as Prion Bay; inland it extends west to the Mt Picton area. Also included in the reserve are Bruny Island and the Tasman Peninsula.

Woodchips

Woodchips manufactured from sawmill waste and other timber previously of limited commercial value, are primarily used for woodpulp production. Three Tasmanian companies, Northern Woodchips Pty. Ltd, Tasmanian Pulp and Forest Holdings Ltd and Associated Pulp and Paper Mills Ltd have negotiated woodchip export contracts with Japanese interests. Before granting woodchip export licences, the Federal Government stipulated that the companies, if they did not already have the capacity, should develop woodpulp manufacturing facilities within 15 years. Articles on each of the three companies' woodchip operations were included in the 1975 edition of the *Year Book*.

Tasmanian Pulp and Forest Holdings Ltd's plant at Spring Bay, near Triabunna on the east coast, has an annual capacity of more than 610 000 tonnes of woodchips. Timber for the project comes from pulpwood concession areas extending along the Eastern Tiers over some 220 kilometres from Murdunna in the south to Eddystone Point in the north. The Company has also been granted concessions over reserve areas covering much of central Tasmania. These areas will ultimately be used provided Tasmanian Pulp and Forest Holdings Ltd meets various stipulations contained in the *Pulpwood Products Industry (Eastern and Central Tasmania) Act* 1968. In addition, the Company is permitted to obtain pulpwood from areas in the reserve set aside by the Forestry Commission for silvicultural purposes or by utilising trees removed to open the forest for economic extraction of milling-quality timber.

The Company's first woodchips were exported from the Spring Bay complex in April 1971; since then, the Company has exported approximately 600 000 tonnes of woodchips per annum.

Associated Pulp and Paper Mills Ltd and Northern Woodchips Pty Ltd constructed their woodchip plants at Long Reach, near Bell Bay, on the Tamar River. Northern Woodchips Pty Ltd has also installed portable and satellite chipping plants in the northern half of Tasmania. A.P.P.M. Ltd draws its timber supplies from Crown forest concessions, private land and sawmill waste, while Northern Woodchips Pty Ltd relies on timber from private lands and sawmill waste. Annual capacity of the A.P.P.M. Ltd plant is 914 500 tonnes of woodchips; Northern Woodchips Pty Ltd's 15-year export contract is for an annual 711 000 tonnes of woodchips.

Both companies commenced production of woodchips in 1972; A.P.P.M. at its Long Reach plant in May 1972 and Northern Woodchips from its portable and satellite chipping plants in mid-1972. First exports by the two companies were made in late 1972. In February 1973 the first log trains commenced using the rail extension to Long Reach giving the two companies economic access to more distant timber supplies.

Forest Production

Definition

The cutting of logs in a forest and the production of sawn timber in a mill seem closely related activities and may both, in fact, be conducted by a single operator with the same team of employees; similarly, the cutting of pulpwood and its later conversion to newsprint or fine paper may be viewed, in a broad sense, as a single activity. For statistical purposes, however, sawmills, paper mills, newsprint mills, woodchip plants, etc., are classified as factories, while logging operations which provide the raw materials for the factories, are classified as forestry activity. It necessarily follows that the definition of forest production must be restricted to include only the output of logs, hewn timber, firewood, tanning bark, etc. before such products have passed into the sector covered by factory statistics. Some forestry products, as just defined (e.g. fence posts and rails, hewn sleepers, firewood, etc.) may go direct to the final consumer without passing as a raw material to the factory sector.

Value of Forest Production

Gross Value of Production is the value placed on the recorded production at the wholesale price realised in the principal markets. In cases where forestry products are consumed at the place of production or where they become raw material for a secondary industry, these points of consumption are presumed to be the principal markets (e.g. the value of logs cut for saw milling is the value on the mill skids).

Local Value (i.e. value of recorded production at the place of production) is ascertained by deducting marketing costs from gross value. Marketing costs include freight, cost of containers, commission, and other charges incidental thereto.

Statistics of Forest Production

The next table shows the production of the various forest products and from where they are obtained, i.e. either Crown or private land. In this table, the 'Logs for processing' figures include the log usage of the woodchip export industry. Woodchips have been an input material for locally based paper and woodpulp plants for many years but demand increased greatly with the establishment of woodchip export markets from 1971.

The following table shows details of forest production:

Forest Production, 1976-77

Product	Obtained from—		Total
	Crown land	Private land	
Logs for processing (a)—			
Forest hardwoods	'000 m ³ 2 051.97	1 710.80	3 762.78
Indigenous softwoods	'000 m ³ 9.78	—	9.78
Plantation grown pines	'000 m ³ 94.91	26.79	121.69
Total logs—Quantity	'000 m ³ 2 156.66	1 737.59	3 894.25
Gross value	\$'000 n.a.	n.a.	50 129
Hewn and other timber (b)—			
Quantity	'000 m ³ 34.06	n.a.	n.a.
Value	\$'000 n.a.	n.a.	(c) 5 300
Total gross value of forest products	\$'000 n.a.	n.a.	55 429

(a) Logs for sawing, peeling, slicing, chipping and pulping. Includes any logs exported or stockpiled; excludes chain-sawn sleepers, etc. which are included below under 'Hewn and other timber'.

(b) Includes firewood, sleepers, transoms, girders, bridge timber, mining timber, poles, piles and other forest products.

(c) Includes estimates of the value of hewn and other timber taken from private land.

The next table shows details of forest production for a five-year period on a basis comparable with the previous analysis:

Forest Production

Product	1972-73	1973-74	1974-75	1975-76	1976-77
Logs for processing (a)—					
Forest hardwood '000 m ³	3 159.6	3 974.3	3 915.9	3 346.5	3 762.8
Indigenous softwood '000 m ³	8.4	11.1	10.9	10.2	9.8
Plantation grown pines '000 m ³	56.4	73.3	70.2	73.4	121.7
Total logs—Quantity '000 m ³	3 224.4	4 058.7	3 997.1	3 430.2	3 894.3
Gross value \$'000	27 897	39 802	46 234	42 496	50 129
Hewn and other timber—					
Quantity (b) '000 m ³	39.4	32.3	38.5	30.0	34.1
Value (c) \$'000	3 025	3 471	3 788	4 495	5 300
Total gross value of forest products \$'000	30 922	43 273	50 022	46 991	55 429

(a) Logs for sawing, peeling, slicing, chipping and pulping. Includes any logs exported or stockpiled; excludes chain-sawn sleepers, etc. which are included below under 'Hewn and other timber'.

(b) From Crown land only; includes firewood, sleepers, transoms, girders, bridge timber, mining timber, poles, piles and other forest products.

(c) Includes estimates of the value of hewn and other timber and firewood taken from private land and of other forest products.

Source of Production Data

The principal sources of data are the returns of the various establishments classified as factories (e.g. sawmills, newsprint mills, paper mills, plywood mills, etc.) which report details of logs, pulpwood, sawmill edgings, off-cuts, etc. used as raw materials; other data are available from the State Forestry Commission and the Bureau's export statistics.

Tasmanian and Australian Log Production

For the purposes of the last two tables, log production is defined as relating to 'logs' for sawing, peeling, slicing, chipping and pulping (i.e. it includes logs used in sawmills as well as those used for production of woodpulp in newsprint and paper mills, woodchips, particle board, etc.). In terms of this definition, of the Australian states, Tasmania is the major producer, the State's log production being over 29 per cent of the Australian total in 1975-76. Two next largest producers, N.S.W. and Victoria, produced 23 per cent and 20 per cent of the total Australian production, respectively in 1975-76. Considering Tasmania's small relative size and population, it is apparent that forest production forms one of its more important contributions to the Australian economy.

Gross and Local Value of Production

The following table gives details of gross and local value of forestry production for a five-year period:

Gross and Local Value of Forestry Production (\$'000)

Particulars	1972-73	1973-74	1974-75	1975-76	1976-77
Gross value (production valued at principal markets)	30 922	43 273	50 022	46 991	55 429
Less marketing costs	5 562	7 393	7 160	6 317	7 528
Local value (production valued at place of production)	25 360	35 880	42 862	40 674	47 901

Timber and Timber Products

Output and Exports

The following table shows timber production by mills for a five-year period, together with exports of sawn timber:

Production and Exports of Sawn Timber

Particulars	1972-73	1973-74	1974-75	1975-76	1976-77
LOGS USED ('000 m ³)					
Hardwood	1 068.65	1 037.77	1 023.08	930.43	894.77
Softwood	28.34	35.96	48.19	54.10	91.68
Total	1 096.99	1 073.73	1 071.27	984.54	986.44
SAWN, PEELED AND SLICED TIMBER PRODUCED (a) ('000 m ³)					
Hardwood	403.85	398.22	388.34	349.68	330.88
Softwood	12.45	16.10	21.81	23.78	37.30
Total	416.29	414.32	410.15	373.47	368.16
EXPORTS OF SAWN TIMBER (b)					
Quantity	'000 m ³ 224.83	270.25	213.43	248.00	313.00
Value	\$'000 20 822	26 156	22 690	26 079	37 083

(a) Includes: plywood, veneer and sliced timber production converted to an equivalent cubic measurement; and rough sawn timber, including that subsequently seasoned and dressed to produce flooring, weatherboards, etc.

(b) Includes dressed and undressed timber.

Geographical Distribution of Sawmills

The next table records the absolute decline in the number of mills over recent years. The area with the heaviest incidence of closures has been the southern orcharding region.

Distribution of Operative Sawmill and Plywood Mill Locations by Statistical Divisions and Sub-divisions

Statistical divisions and sub-divisions	1972-73	1973-74	1974-75	1975-76	1976-77
Hobart	12	14	12	13	12
Southern	70	73	64	56	43
Northern—					
Tamar	61	56	55	52	48
North Eastern	29	30	27	25	21
Total	90	86	82	77	69
Mersey-Lyell—					
North Western	37	38	36	34	30
Western	8	7	7	7	7
Total	45	45	43	41	37
Tasmania	217	218	201	187	161

Average Size of Mills

In the year 1963-64 no Tasmanian sawmill exceeded an annual log input of 25 000 cubic metres. A size distribution of mills, classified by volume of log inputs, for recent years is given in the next table:

**Number of Operative Sawmills (including Plywood Mills)
by Volume of Annual Log Input**

Size classification (cubic metres)	Number of Sawmills and plywood mills				
	1972-73	1973-74	1974-75	1975-76	1976-77
Up to 500	42	50	53	44	33
501- 1 000	24	28	19	19	17
1 001- 1 500	14	11	10	13	11
1 501- 3 000	38	33	28	22	25
3 001- 5 000	29	30	26	27	18
5 001-10 000	40	40	35	36	38
10 001-15 000	14	14	14	12	5
15 001-30 000	14	8	11	9	10
30 001-45 000	1	2	4	3	2
45 001-60 000	—	1	—	2	—
Over 60 000	1	1	1	—	2
Total	217	218	201	187	161

Mill Production of Timber

As shown previously, logs treated in sawmills and plywood mills during 1976-77 for the production of sawn, peeled, and sliced timber totalled 986 000 m³ while the resulting timber produced totalled only 368 000 m³. The difference between the volume of logs treated and of timber produced is not all waste from the millers' point of view. Admittedly, there is very limited use for sawdust but most offcuts are sold as input to the woodchip and woodpulp industries or docked and sold as firewood.

Chipping, Grinding and Flaking of Wood

Apart from sawmills and plywood mills, the main users of logs from Tasmanian forests were, until early 1971, the mills producing as their final products woodpulp, paper, hardboard and particle board. As an intermediate stage in the various processing systems, the timber used was chipped, ground or flaked at eight locations.

The importance of woodchipping for export is indicated by the following table:

Chipping, Grinding and Flaking of Wood

Particulars		1972-73	1973-74	1974-75	1975-76	1976-77
Producing locations at 30 June	number	28	30	31	31	32
Materials used—						
Logs (a)	'000 m ³	2 133.65	2 961.66	2 866.34	2 396.09	2 913.18
Sawmill offcuts	'000 m ³	224.10	268.73	246.43	216.09	248.21
Total	'000 m³	2 357.75	3 230.39	3 112.77	2 612.18	3 161.39
Chipped, ground and flaked wood produced (green weight)—						
For local processing ..	'000 tonnes	793.74	892.47	785.59	743.60	832.00
For export	'000 tonnes	1 397.18	2 150.16	2 161.28	1 692.80	2 134.84
Total	'000 tonnes	2 190.93	3 042.63	2 946.87	2 436.40	2 966.84

(a) Includes log equivalent of limbwood and billets.

The State Forestry Commission

The principal officers of the State Forestry Commission are the chief commissioner and two assistant commissioners. At 30 June 1977 the Commission employed a work force of 675 including administrative staff.

The Forestry Commission is primarily concerned with the conservation of Tasmania's

State forests; this requires that it exercise control over the rate at which logs and pulpwood are taken, and also that it introduce effective measures to ensure regeneration. Other important functions include: (i) road construction, providing access to State forests; (ii) maintaining an annual program of softwood planting; (iii) protection of the forest estate from damage by fire, insects and disease; (iv) research, which aims to improve forest health and growth while developing more effective techniques of forest regeneration and fire protection; and (v) the management of State forests for recreation and wildlife conservation.

The Forestry Commission's responsibility for State forests was widened by the *Forestry Act 1977*, which empowered the Commission to promote the development and proper management of private forests. This Act is one of the first formulations resulting from the findings of a Board of Inquiry into Private Forestry Development, and provided for the creation of a new Private Forestry Division within the Forestry Commission. (The Board's Report is summarised in the 1978 edition of the *Year Book*.)

Some concept of the scope of Forestry Commission activities can be obtained from the following table:

Activities of Forestry Commission: Summary
(Source: Forestry Commission)

Particulars	1972-73	1973-74	1974-75	1975-76	1976-77
Regeneration assistance, area of native forests treated hectares	3 146	4 492	7 296	3 848	5 316
Seedlings produced '000	3 266	2 901	3 707	3 966	3 849
Plantations—					
Established during year hectares	1 902	1 903	1 776	2 198	1 965
Pruned hectares	495	454	368	330	561
Thinned hectares	273	409	455	367	351
Firebreaks—					
Constructed kilometres	49	73	54	90	68
Roads—					
Constructed kilometres	130	103	129	205	168
Improved kilometres	5	12	25	86	24

The Commission has a responsibility for controlling forest fires on or near State forests; losses through bush fires fought by the Commission in recent years are reported in the following table:

Bush Fires Fought by the Forestry Commission
(Source: Forestry Commission)

Year	Fires reported	Area burnt				Cost of suppression
		State forest	Other Crown land	Private property (a)	Total (a)	
	No.	hectares	hectares	hectares	hectares	\$
1971-72	95	1 016	292	518	1 826	13 841
1972-73	305	50 170	64 870	25 860	140 900	262 531
1973-74	62	2 147	3 727	180	6 054	23 688
1974-75	48	805	412	1 083	2 300	18 205
1975-76	88	5 812	13 097	1 040	19 949	69 512
1976-77	59	2 701	141	669	3 511	40 191

(a) Includes only those fires on private property fought to protect adjoining State forest or timbered Crown land.

Total expenditure by the Commission during 1976-77 was \$14.4m. This expenditure was funded from Loan Funds, Consolidated Revenue, funds provided under the *Softwoods Forestry Agreement Act 1976* and monies made available for unemployment relief. Money collected each year (mainly from timber royalties) is paid into Consolidated Revenue and, by law, becomes a grant to the Commission the following year.

The main revenue of the Forestry Commission is derived from royalties, i.e. charges paid by those taking timber from Crown lands. By law, such revenue is specifically reserved for expenditure on forestry. The next table has been compiled to show the revenue and expenditure of the Commission for the last five years; expenditure exceeds revenue since money from State loan funds devoted to forestry purposes is included in expenditure.

Forestry Commission: Revenue and Expenditure
(\$'000)

Particulars	1972-73	1973-74	1974-75	1975-76	1976-77
REVENUE					
Royalties	2 369	3 141	3 724	4 001	5 088
Sale of forest products	96	66	86	103	150
Other	52	52	55	55	75
Total	2 517	3 259	3 865	4 159	5 313
EXPENDITURE (a)					
Administration—					
Revenue collection	295	422	584	603	752
Forest management	700	850	1 193	1 362	1 510
General	605	725	1 057	1 261	1 543
Forest works—					
Road construction	926	1 157	1 348	2 006	2 589
Building and other	102	199	168	497	643
Afforestation and reafforestation	1 657	1 917	2 633	3 582	4 409
Forest protection (n.e.i.)	274	198	230	357	374
Mapping and surveys	154	220	377	549	639
Land purchases	4	8	2	17	104
Purchases, plant and equipment	43	37	83	368	811
Interest on advances	500	550	654	828	1 016
Total	5 260	6 283	8 329	11 430	14 389

(a) Aggregate expenditure from all sources, i.e. Consolidated Revenue, Loan and Trust Funds.

Federal Government-State Agreement

The *Federal Softwoods Forestry Agreement Act 1967* was passed with the specific intention of increasing the rate of softwood-plantings in Australia by providing Federal financial assistance to the states. Under the Act each state was allocated: (i) a *base year* area of softwood plantings which was financed by the state; and (ii) a *scheduled* area in excess of the base year figure, the excess financed by special Federal Government loans. The base year area was constant for each year of the five-year program which commenced in 1966-67.

In late 1972 Federal legislation was passed which extended the Federal Government-State softwood forestry agreement for a further five years. The legislation was made retrospective from July 1971. Financial terms were similar to those set out in the 1967 agreement. The *Softwoods Forestry Agreement Act 1976* extended the agreement, but with reduced planting rates, for an additional year from 1 July 1977. In 1978, the financial agreement was renewed for five years from 1 July 1977. The Commonwealth was to contribute to the tending of those plantations which had been established under the agreement during the 11-year period from 1966-67 to 1976-77.

MINING

Introduction

For statistical purposes, mining is taken to cover the operations normally thought of as mining and quarrying (i.e. the removal from underground or surface workings of ores, etc.), the recovery of minerals from ore dumps, tailings, etc. and ore dressing (i.e. concentration and other elementary treatment). It does not include the smelting and/or refining of metallic

minerals or the processing of non-metallic minerals (e.g. limestone into cement); these operations are classified as manufacturing.

In the present Tasmanian economy, two important metals will serve to illustrate the distinction between mining and manufacturing: aluminium, produced at Bell Bay on the Tamar; and zinc at Risdon near Hobart. In terms of the previous definition, the two metals are considered to be the output of manufacturing and only a small part of their total value is attributable to the mining industry in Tasmania. In the case of aluminium, no Tasmanian ores or concentrates are used and no value accrues to the Tasmanian mining industry. A substantial part of the value of the aluminium is, in fact, accounted for by imported materials. Zinc is produced from both imported and locally-produced concentrates, but only the value of the local concentrates produced at Rosebery is included in the Tasmanian mining industry. The same principle applies with the State's iron-ore pellet industry, i.e. extraction of the ore is classified as mining but pellet-making is classified as manufacturing.

Historical

Tasmania's first mine opened at Port Arthur in 1834. In that year, it produced 61 tonnes of coal but closed just 10 years later due to the poor quality of the coal and other discoveries. Major mineral discoveries were not made until later in the nineteenth century—tin oxide was first discovered near Mt Bischoff in 1871, silver-lead ore was discovered in the Zeehan-Dundas area in 1882 and the 'Iron Blow' copper ore outcrop near Mt Lyell was discovered in 1883. These and later discoveries led to the establishment of mining operations which have had a significant impact on Tasmania's growth. A more detailed historical background to the development of mining in the State is included in the 1976 and earlier editions of the *Year Book* and a 'West Coast Mining Chronology' is included in the 1968 edition.

Importance of Mining to the State

Mining activity in Tasmania has been subject to frequent and severe fluctuations, mainly as a result of changes in supply and demand. Nevertheless, mining forms an important sector of the Tasmanian economy. The next table lists the major mineral products produced in Tasmania, the locations of the main mines, the assayed content of ores mined during 1976-77 and the assayed content of Tasmanian ores mined as a percentage of total Australian production.

Major Mineral Products: Tasmania-Australia Comparison, 1976-77

Mineral product	Location of main mine(s)	Unit	Assayed content of ores mined		Per cent (a)
			Tasmania	Australia	
Coal (black)	Fingal Valley	tonnes	(b) 193 927	(b) 75 982 000	0.3
Copper	Mt Lyell	tonnes	22 809	217 216	10.5
Gold	Mt Lyell, Rosebery	kg	1 691	15 666	10.8
Iron	Savage River	tonnes	1 601 011	60 164 000	2.7
Lead	Rosebery, Williamsford	tonnes	20 412	418 226	4.9
Silver	Rosebery, Williamsford	kg	79 047	840 084	9.4
Sulphur	Mt Lyell, Rosebery	tonnes	160 977	434 050	37.1
Tin	Renison Bell	tonnes	6 832	10 325	66.2
Tungstic oxide	Grassy (King Island)	tonnes	2 557	n.p.	n.p.
Zinc (c)	Rosebery	tonnes	69 967	475 306	14.7

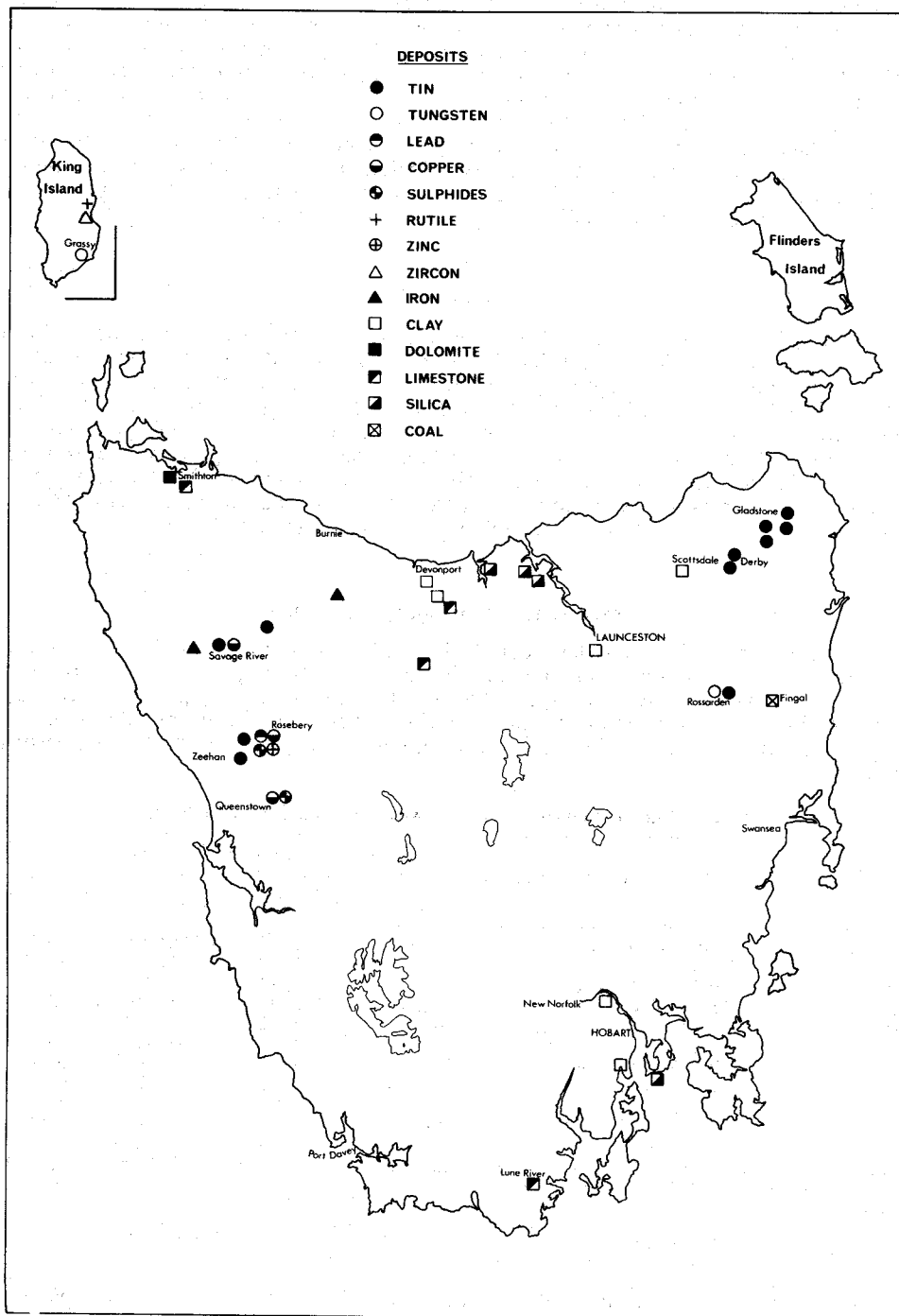
(a) Tasmanian production as a proportion of Australian production. (At 30 June 1977, Tasmania's population was 2.9 per cent of the total population of Australia.)

(b) Actual production.

(c) Tasmania accounted for approximately 65 per cent of Australia's total refined zinc production in 1976-77. Both local and interstate concentrates are refined in the State.

The accompanying map shows the locations of major operative mines. No indication of relative size is given as the scale of operations varies greatly between mines.

Location of Principal Mineral Deposits Tasmania
Metallic, Non-Metallic and Fuel Minerals



Major Mining Companies

Normally, the Bureau does not publish information relating to any single enterprise or establishment but only publishes statistical aggregates where these do not directly or indirectly reveal the operations of any single informant. However, inclusion of some description of some of the major mining companies operating in Tasmania is most desirable; therefore, the State Department of Planning and Development has prepared the following brief summaries and accepts responsibility for the information given. (The operations of The Electrolytic Zinc Company of A/asia Ltd (Risdon and Rosebery) and Comalco Aluminium (Bell Bay) Ltd, together with other major Tasmanian manufacturing companies, are summarised in the section 'Industrial Development' which appears in Chapter 9.)

King Island Scheelite (King Island): A member of the Peko-Wallsend Limited group of companies, this Company mines and processes scheelite ore to the concentrate stage for export. During 1977-78 through-put of the concentrate plant was increased to 400 000 tonnes a year. A new chemical treatment plant to upgrade the flotation concentrates commenced operation in 1978.

Mt Lyell Mining and Railway Co. Ltd (Queenstown): This Company, which commenced operations in 1897, is producing copper in the form of concentrates at the rate of about 18 000 tonnes of contained copper per year from 1 600 000 tonnes of ore. The ore is won by underground methods. Due to depressed copper prices, the Company has incurred substantial losses on its mining operations in recent years. Government financial assistance has been provided to the Company since 15 August 1977 with a view to enabling it to continue operations until copper prices improve. On 23 August 1978, the Federal and Tasmanian Governments announced that they would jointly share the Company's losses on its mining operations until mid-1980, up to a maximum of \$7.6 million. (The 1978 *Year Book* includes a special article titled 'Problems for the Mt Lyell Mining and Railway Co. Ltd'.)

Renison Ltd (Rosebery): The present mining and concentrating plant was commissioned in December 1966. It has grown out of early mining operations to become the largest tin mine in Australia. It has the further distinction of being the world's largest producer of tin metal in concentrates from a hard rock underground mining operation. A concentrate leach plant was completed in August 1977. This plant treats both high grade gravity and low grade flotation concentrates by sulphuric acid leach to produce a single product containing about 50 per cent tin. Smelting trials were conducted in Japan in 1977 with a view to establishing an electric tin smelter in Tasmania to treat tin concentrates from the leach plant. Current production rates are of the order of 11 000 tonnes of tin concentrate, containing 5 500 tonnes of tin, from 600 000 tonnes of ore. (See also the special article on this Company later in the Chapter.)

Savage River Mines (Pickands Mather and Co. International Managing Agent) (Savage River): Established at a cost of \$80m, the Port Latta iron ore pelletising plant commenced operations in 1968. Annual production was increased during 1971 to more than 2.5m tonnes of high-grade iron ore pellets. The entire production is sold to Japanese steel mills.

Statistics of Mineral Production

Source of Data

Statistics relating to quantities of minerals produced (including assayed metallic content) are, in the main, obtained from the State Department of Mines and are supplemented, where necessary, with data obtained from the annual census of mines and quarries conducted by the Australian Bureau of Statistics, and from the Federal Bureau of Mineral Resources.

Other details of the mining industry such as employment, value of output, and costs of production, etc. are obtained from the annual census of mines and quarries, conducted by the Bureau. This census was first conducted in 1952 and the information obtained from each census was basically the same until 1968. As from 1968-69 the mining sector census was standardised in accordance with the concepts employed in the integrated economic censuses (see 'Integrated Economic Censuses' in Chapter 18 for a comparison between mining and other industries included in the integrated censuses).

Tasmania's larger mining operations, in particular metal mining, are located in the west of the State and are concentrated in an area from Queenstown to Savage River. A number of tin mines operate in the north-east of Tasmania but their combined output no longer compares with either former activity in that area or current operations in the west.

Metallic Minerals

The table that follows shows the quantity of metallic minerals produced in Tasmania for a five-year period:

Metallic Minerals: Production

Mineral	1972-73	1973-74	1974-75	1975-76	1976-77
TONNES					
Copper concentrate	91 514	96 015	101 672	83 255	70 237
Copper-tin concentrate	4 586	3 124	2 506	2 896	2 610
Iron—Concentrate	2 450 932	2 304 575	2 051 783	2 109 363	2 315 196
Oxide	9 590	12 879	10 989	9 831	14 700
Lead concentrate	22 837	16 937	12 457	13 341	13 785
Lead-copper concentrate	16 605	19 919	19 952	19 480	25 709
Pyrite concentrate	197 813	238 850	218 474	212 931	227 242
Rutile concentrate	—	3 237	4 844	6 994	3 886
Tin concentrate	13 895	12 496	12 597	12 889	15 035
Tungsten concentrates—					
Scheelite concentrate	1 788	1 630	1 672	2 360	3 180
Wolfram concentrate	r 642	r 180	r 310	r 274	215
Zinc concentrate	125 087	127 352	108 793	123 944	126 271
Zircon concentrate	—	3 072	7 560	7 953	3 722
KILOGRAMS					
Gold (not in concentrates)	—	2	2	1	1

Assayed Content: In the following table, the various concentrates have been grouped to show their content in terms of individual metals. The contents stated are as determined by assay and include all pay metals and metals which are a refiner's prize; totals compiled on this basis contain no allowances for losses in smelting and refining and therefore, in general, exceed the quantities actually recoverable. The table refers exclusively to minerals mined in Tasmania.

Assayed Contents of Metallic Minerals Produced

Mineral	1972-73	1973-74	1974-75	1975-76	1976-77
COPPER (TONNES)					
Copper concentrate	23 449	24 292	25 824	21 298	18 444
Copper-tin concentrate	878	652	522	628	535
Lead concentrate	78	67	31	63	60
Lead-copper concentrate	1 828	2 350	2 652	2 656	3 328
Zinc concentrate	518	465	351	416	443
Total	26 751	27 826	29 380	25 061	22 809
GOLD (KILOGRAMS)					
Copper concentrate	475	470	508	434	367
Lead concentrate	91	82	30	30	27
Lead-copper concentrate	1 038	972	913	986	1 133
Zinc concentrate	165	166	116	148	164
Other sources	—	2	2	1	1
Total	1 769	1 692	1 569	1 598	1 691
IRON (TONNES)					
Iron concentrate	1 695 961	1 599 592	1 426 352	1 463 044	1 601 011

Assayed Contents of Metallic Minerals Produced—continued

Mineral	1972-73	1973-74	1974-75	1975-76	1976-77
LEAD (TONNES)					
Lead concentrate	13 414	10 920	8 648	8 919	9 079
Lead-copper concentrate	5 034	5 138	4 207	4 823	6 215
Zinc concentrate	4 616	5 568	5 207	5 800	5 118
Total	23 064	21 626	18 062	19 542	20 412
SILVER (KILOGRAMS)					
Copper concentrate	3 965	4 418	5 373	3 983	2 973
Lead concentrate	16 785	13 272	9 383	11 005	11 874
Lead-copper concentrate	49 357	53 034	45 211	42 780	49 533
Zinc concentrate	16 642	17 194	13 320	17 745	14 667
Total	86 749	87 918	73 287	75 515	79 047
SULPHUR (TONNES)					
Lead concentrate	4 565	3 118	2 138	2 370	2 507
Lead-copper concentrate	4 427	5 673	6 055	5 527	7 674
Pyrite concentrate	93 709	114 141	103 848	101 156	109 671
Zinc concentrate	41 064	41 820	35 191	40 284	41 125
Total	143 765	164 752	147 232	149 337	160 977
ZINC (TONNES)					
Lead concentrate	3 776	2 247	1 301	1 348	1 560
Lead-copper concentrate	2 333	2 657	2 409	1 942	2 490
Zinc concentrate	66 544	67 057	57 747	64 028	65 917
Total	72 653	71 961	61 457	67 318	69 967
TIN (TONNES)					
Copper-tin concentrate	129	81	73	76	72
Tin concentrate	6 289	5 957	5 863	5 794	6 760
Total	6 418	6 038	5 936	5 870	6 832
TUNGSTIC OXIDE (WO ₃) (TONNES)					
Scheelite concentrate	1 319	1 171	1 207	1 670	2 398
Wolfram concentrate	475	134	230	206	159
Total	1 794	1 305	1 437	1 876	2 557
CADMIUM (TONNES)					
Zinc concentrate	165	177	135	172	177
MANGANESE (TONNES)					
Zinc concentrate	367	423	262	316	342
TITANIUM OXIDE (TONNES)					
Rutile concentrate	—	3 140	4 643	6 710	3 692
Zircon concentrate	—	9	23	23	11
Total	—	3 149	4 666	6 733	3 703
ZIRCON (TONNES)					
Rutile concentrate	—	26	38	56	30
Zircon concentrate	—	2 009	4 973	5 259	2 456
Total	—	2 035	5 011	5 315	2 486

Fuel Minerals (Coal)

The only fuel mineral mined in Tasmania is coal. There are known deposits of coal throughout much of Tasmania but the most important are those located in the Fingal Valley in the north-east which were first located in 1866.

In 1890 Tasmania produced 55 000 tonnes of coal and production continued to rise until a peak of over 300 000 tonnes was reached in 1959-60. Since then there has been a marked decline due to competition from fuel oil, particularly in manufacturing industries. Recently the downward trend in production has been reversed with at least one major Tasmanian manufacturer switching back to coal from oil as his fuel for operations. Production details for recent years (in tonnes) are as follows: 1972-73, 128 478; 1973-74, 122 788; 1974-75, 137 868; 1975-76, 176 352; and 1976-77, 193 927 (all production is of black, bituminous coal).

Non-Metallic (Excluding Fuel) Minerals

The quarrying of limestone is the earliest recorded activity in the field of non-metallic mineral mining in the State, burnt lime being sought as a base for building mortar. Production of this non-metallic mineral has gradually increased to meet a rising demand in various industrial processes. Large exports of limestone were made in the period 1918-1947, when the B.H.P. Co. Ltd operated quarries at Melrose on the North-West Coast.

The next table shows the Tasmanian production of non-metallic minerals for a five-year period:

**Non-Metallic (Excluding Fuel) Minerals Production
(Tonnes)**

Mineral	1972-73	1973-74	1974-75	1975-76	1976-77
Clays and shales—					
Brick	128 080	138 770	139 679	156 254	153 306
Other	90 892	99 492	74 496	64 447	49 704
Dolomite	3 852	5 450	6 199	9 259	7 734
Limestone (a)	558 948	658 210	579 812	548 969	667 090
Peat moss	241	318	390	535	330
Ochre	74	62	—	—	—
Pebbles	1 134	1 264	976	1 771	1 189
Silica (b)	25 596	31 644	32 178	34 708	47 418

(a) Excludes quantities used directly as building or road construction material.

(b) For glass, chemical, etc. manufacturing.

Construction Materials

In addition to the types of mining and quarrying previously described there is the quarrying of construction materials (for buildings, roads, etc.) such as crushed and broken stone, gravel and sand. This type of activity also is taken into account when placing a value on the output from mines and quarries, measuring their level of employment, etc.

Census of Mining Establishments

Annual censuses of mines were conducted by the Bureau from 1952; the last 'old-style' mining census covered the calendar year 1968. For 1968-69 simultaneous integrated economic censuses were undertaken in respect of mining and four other sectors (manufacturing; wholesale trade; retail trade; and electricity and gas production and distribution). In the section 'Integrated Economic Censuses' in Chapter 18, the results of these censuses are presented so that the economic significance of mining can be compared with that of other sectors included in the censuses. Definitions of concepts and terms used are also included in that section.

Mining Establishments—Summary of Operations

The tables that follow give results for the mining censuses from 1972-73 to 1976-77:

Census of Mining Establishments
Summary of Operations by Industry Sub-division

Particulars	Unit	1972-73	1973-74	1974-75	1975-76	1976-77
METALLIC MINERALS						
Establishments (a)	no.	16	16	16	18	19
Persons employed (b)—						
Males	no.	3 913	3 852	3 924	3 723	3 596
Females	no.	174	172	211	199	184
Total	no.	4 087	4 024	4 135	3 922	3 780
Wages and salaries	\$'000	26 955	29 179	40 993	44 430	48 309
Turnover	\$'000	90 605	138 417	128 489	124 725	174 523
Stocks—						
Opening	\$'000	13 941	12 541	15 108	17 174	22 760
Closing	\$'000	12 511	15 122	17 172	22 762	19 416
Purchases, etc. (c)	\$'000	29 622	59 099	53 984	54 545	61 341
Value added	\$'000	59 553	81 899	76 569	75 768	109 838
Rent, leasing expenses	\$'000	86	151	491	997	1 071
Fixed capital expenditure (d)	\$'000	12 107	12 383	18 129	16 937	12 100
COAL (e)						
Establishments	no.	1	1	1	1	1
CONSTRUCTION MATERIALS						
Establishments	no.	21	29	26	26	28
Persons employed (b)—						
Males	no.	142	181	163	171	180
Females	no.	2	4	4	7	5
Total	no.	144	185	167	178	185
Wages and salaries	\$'000	647	892	1 041	1 392	1 607
Turnover	\$'000	3 407	4 972	4 871	6 851	7 813
Stocks—						
Opening	\$'000	342	360	347	419	610
Closing	\$'000	355	378	419	519	524
Purchases, etc. (c)	\$'000	1 681	2 566	2 553	3 771	3 175
Value added	\$'000	1 740	2 424	2 389	3 181	4 552
Rent, leasing expenses	\$'000	39	47	68	246	218
Fixed capital expenditure (d)	\$'000	170	666	737	953	793
OTHER NON-METALLIC MINERALS						
Establishments (e)	no.	10	10	13	12	15
TOTAL MINING						
Establishments	no.	48	56	56	57	63
Persons employed (b)—						
Males	no.	4 150	4 139	4 232	4 039	3 939
Females	no.	176	178	218	209	194
Total	no.	4 326	4 317	4 450	4 248	4 133
Wages and salaries	\$'000	28 091	30 623	43 026	47 197	51 538
Turnover	\$'000	95 350	144 917	135 688	134 446	187 581
Stocks—						
Opening	\$'000	14 332	12 966	15 526	18 020	23 483
Closing	\$'000	12 933	15 570	18 017	23 394	20 086
Purchases, etc. (c)	\$'000	31 765	62 200	57 276	59 213	65 565
Value added	\$'000	62 186	85 321	80 903	80 607	118 619
Rent, leasing expenses	\$'000	151	235	643	1 351	1 452
Fixed capital expenditure (d)	\$'000	12 482	13 159	19 430	17 972	13 102

(a) Excludes small tin producing establishments with value of sales less than \$20 000.

(b) At last pay-period in June; includes working proprietors.

(c) Purchases, transfers in and selected expenses.

(d) Outlay on fixed tangible assets less disposals.

(e) Other data not available for separate publication but included in 'Total Mining'.

Smelting and Refining of Metals

The turnover for a mining establishment includes the selling value of products produced at the establishment (e.g. in a metal mining establishment usually the selling value of specific concentrates at the mine). Earlier, reference was made to the fact that Tasmanian manufacturing industry statistics include the extraction and refining of metals, not only from locally produced ores and concentrates, but also from those that have been imported.

The next table shows details of establishments engaged in making iron ore pellets; extracting and refining zinc and aluminium; and making ferro-manganese alloys. It will be seen by comparing details from the following table with the previous table that, in terms of 'Value added', manufacturing activity became more important than mining activity in 1974-75.

Non-Mining Activity: Extracting and Refining Metals

Particulars	Unit	1972-73	1973-74	1974-75	1975-76
Establishments	no.	5	5	4	4
Persons employed (a)	no.	3 508	3 465	3 263	2 872
Turnover	\$'000	143 726	176 227	200 556	212 637
Value added	\$'000	48 966	65 912	81 112	83 766

(a) Average over whole year, includes working proprietors.

In the previous table, the principal metals and concentrates included are iron ore pellets (from local ore), ferro-manganese alloy (from imported ores), zinc and cadmium (from local and imported ores), alumina and aluminium (from imported bauxite). The codes for the Australian Standard Industrial Classification (ASIC) classes of establishments included in the table are: 2 911; 2 912; 2 921; 2 922; 2 923; and 2 924. The value added in this table does not duplicate values already recorded in the mining sector since the cost of basic raw materials (ores or concentrates) is one of the recorded costs (purchases and selected expenses) of manufacture deducted from the value of turnover.

The next table gives details of the production of zinc by refinery processes:

**Non-Mining Activity: Production of Refined Zinc
(Tonnes)**

Year	Production	Year	Production	Year	Production
1968-69	151 094	1971-72	175 798	1974-75	152 749
1969-70	170 931	1972-73	193 782	1975-76	137 637
1970-71	162 271	1973-74	182 749	1976-77	170 685

Aluminium Production: The refinery for the production of alumina and refined aluminium is situated at Bell Bay on the River Tamar. Production of alumina commenced in February 1955, and of refined aluminium in September 1955. Published statements indicate that the capacity of the plant, in terms of primary aluminium, has been lifted steadily in recent years. The commissioning in 1971 of a third potline brought annual capacity to 95 500 tonnes, nearly eight times the plant's capacity in 1961.

Mineral Exploration (Other than for Petroleum)

The statistics in the following tables relating to exploration for minerals other than petroleum are derived from the annual census of mineral exploration.

'Mineral exploration' consists of the search for mineral deposits, the appraisal of newly-found deposits, and the further appraisal of known deposits (included those being worked) by geological, geophysical, geochemical and other methods (included drilling). Exploration for water is excluded. The construction of shafts and adits is included if primarily for exploration purposes.

The data obtained in the mineral exploration census are divided into the following categories:

Exploration on Production Leases: Relates to exploration carried out on a production lease currently producing, or under development for production of, minerals other than petroleum. Mines included in this section of the mineral exploration census correspond closely to those in the annual census of mining and quarrying with the exception of a limited number of itinerant prospectors and small mines excluded from the collection.

Exploration on Other Areas: Relates to: (i) exploration carried out on areas covered by exploration licences issued by the Department of Mines for minerals other than petroleum; and (ii) exploration by private enterprise for minerals which is not directly connected with areas under lease or licence, including general surveys, aerial surveys, report writing, map preparation and other off-site activities not directly attributable to particular lease or licence areas.

**Mineral Exploration Other Than for Petroleum: Expenditure
(\$'000)**

Year	Wages and salaries paid	Stores, materials, fuels, etc. purchased	Payments to contractors (a)	Other current expenditure (b)	Net capital expenditure (c)	Total
PRIVATE EXPLORATION ON PRODUCTION LEASES						
1972-73	404	116	408	n.p.	n.p.	1 077
1973-74	461	168	452	95	24	1 200
1974-75	596	143	859	79	63	1 740
1975-76	363	86	501	60	21	1 031
1976-77	338	131	712	274	22	1 477
OTHER PRIVATE EXPLORATION						
1972-73	556	101	1 105	n.p.	n.p.	2 314
1973-74	899	317	1 180	548	49	2 994
1974-75	1 129	397	1 660	517	121	3 824
1975-76	850	347	1 188	637	70	3 092
1976-77	811	325	1 024	598	79	2 838
TOTAL PRIVATE EXPLORATION						
1972-73	960	217	1 512	674	29	3 392
1973-74	1 360	485	1 632	643	74	4 194
1974-75	1 725	540	2 519	596	184	5 565
1975-76	1 213	433	1 690	696	92	4 124
1976-77	1 149	456	1 736	872	102	4 315
TOTAL GOVERNMENT EXPLORATION (d)						
1972-73 ...	368	—	—	34	—	401
1973-74 ...	197	17	3	28	2	246
1974-75 ...	318	62	2	39	13	435
1975-76 ...	366	50	—	77	31	523
1976-77 ...	455	50	—	50	21	576
TOTAL PRIVATE AND GOVERNMENT EXPLORATION						
1972-73 ...	1 328	217	1 512	708	29	3 793
1973-74 ...	1 557	502	1 635	671	76	4 440
1974-75 ...	2 043	602	2 522	635	199	6 000
1975-76 ...	1 579	483	1 690	773	122	4 647
1976-77 ...	1 604	506	1 736	922	123	4 891

(a) Amounts paid to contractors, geological consultants, etc., employed to carry out exploration activities.

(b) Other current exploration expenditure such as maintenance expenses, map preparation, aerial surveys, and rent and fees paid to governments for mineral tenements.

(c) From 1973-74 net capital expenditure is defined as expenditure on fixed tangible assets less disposals. In previous years, capital expenditure was defined as expenditure on fixed tangible assets.

(d) Exploration by Tasmanian Department of Mines.

The next table shows the total drill hole depths drilled, sunk or driven in mineral exploration (other than for petroleum) in recent years:

Mineral Exploration Other Than for Petroleum: Metres Drilled, Sunk or Driven

Year	Drilling		
	Core (a)	Non-core (b)	Total
PRIVATE EXPLORATION ON PRODUCTION LEASES			
1972-73	32 331	839	33 170
1973-74	38 087	27 543	65 630
1974-75	44 036	918	44 954
1975-76	16 419	494	16 913
1976-77	19 441	198	19 639
OTHER PRIVATE EXPLORATION			
1972-73	14 245	12 231	26 476
1973-74	20 848	9 785	30 633
1974-75	26 798	8 674	35 472
1975-76	21 514	6 291	27 805
1976-77	19 005	2 123	21 128
TOTAL PRIVATE EXPLORATION			
1972-73	46 576	13 070	59 646
1973-74	58 935	37 328	96 263
1974-75	70 834	9 592	80 426
1975-76	37 933	6 785	44 718
1976-77	38 446	2 321	40 767
TOTAL GOVERNMENT EXPLORATION (c)			
1972-73	1 456	—	1 456
1973-74	1 519	—	1 519
1974-75	1 627	—	1 627
1975-76	2 572	—	2 572
1976-77	3 835	—	3 835
TOTAL PRIVATE AND GOVERNMENT EXPLORATION			
1972-73	48 032	13 070	61 102
1973-74	60 454	37 328	97 782
1974-75	72 461	9 592	82 053
1975-76	40 505	6 785	47 290
1976-77	42 281	2 321	44 602

(a) Diamond drilling, or any kind of drilling in which cores are taken.

(b) Alluvial, percussion and other drilling in which cores are not taken.

(c) Exploration by Tasmanian Department of Mines.

RENISON LIMITED

(This article was contributed by the Company)

Location

Renison Limited operates a tin mine and concentrating plant at Renison Bell on Tasmania's rugged West Coast. The township, named after George Renison Bell, is located some 136 km south of Burnie. The main work force lives at Zeehan, just 16 km away.

Tin Production

The total Western World production of tin for the year ended June 1977 was 182 400 tonnes, of which Australia produced 10 299 tonnes.

For many years Tasmania has been the major tin producing state of Australia. The total Tasmanian production of tin contained in ores and concentrates for the year ended June 1977 was 6 832 tonnes, or 66 per cent of the Australian total and, of this figure, Renison Limited produced 4 783 tonnes. Up to June 1977, the estimated production of tin metal in concentrates from Tasmanian mines was over 200 000 tonnes. The estimated tin content (in tonnes) of the production from major Tasmanian tin mines is as follows: Mount Bischoff, Waratah, 56 000 (from 1882 to 1929); Renison Bell, 42 400 (up to 1978); Briseis deep lead, Derby, 19 800 (1900 to 1945); Aberfoyle, Rossarden, 15 200 (up to 1977); and Cleveland, Luina, 14 500 (1968 to 1977).

Renison Bell

Discovery

Mines Department records credit the first reported discovery of Cassiterite (tin oxide) in the area to Ringrose Nicholson, who pegged a 32.4 hectare (80 acre) lease straddling the Ring River in June 1890. He noted his discovery as 'tin'.

One month earlier, prospector George Renison Bell had pegged four leases over an area stretching north from Renison Bell Hill across the Argent River. He described the minerals as 'silver-lead'. He then transferred these leases to the Renison Bell Prospecting and Mining Company (N.L.), which was registered on 22 September 1890. A report published eight years later indicated that it was most unlikely that George Renison Bell was aware that the gossan which was the principal rock outcrop on this lease contained cassiterite.

Early Mining

Alluvial mining for cassiterite commenced shortly after the initial discovery by Nicholson, and in 1890 further prospecting indicated stanniferous gossans overlying massive bodies of cassiterite bearing iron sulphides, chiefly pyrrhotite. In 1907 the first concentrator was built by the Boulder Tin Mining Company. Other small plants were operated until the deposits neared exhaustion around 1922. In 1936, experiments indicated that sulphides could be removed economically by flotation, and Renison Associated Tin Mines (N.L.) was formed to treat sulphide ore transported to Renison Bell, 4 km from the Boulder/Battery area.

Diamond drilling during the years 1955-57 indicated that deposits were much larger than had been estimated. In 1958 the Mount Lyell Mining and Railway Company Limited gained a controlling interest in the company, resulting in renewed mining operations and a vigorous exploration program. By 1962, the Company was operating profitably and exploration had located substantial ore-bodies.

The mining company's name was changed to Renison Limited in 1964, the same year Consolidated Gold Fields Australia Limited gained a controlling interest through its holdings in the Mount Lyell Company. In 1976 the Mount Lyell Mining and Railway Company Limited disposed of its interest in Renison Limited to its shareholders, making Renison Limited a subsidiary of Consolidated Gold Fields Australia Limited.

Development of the Present Complex

New Mine

Following the discovery of the Federal lode in 1965, the decision was made to develop the current Renison mining operation. A development program was commenced for a mine and concentrator, along with full maintenance and administrative facilities.

The mine development program involved driving a one in nine declined adit in the footwall of the Federal-Bassett shear. This decline has now reached a length of 4.6 km from the adit entrance, and a vertical depth of 512 metres, and serves the ore shoots of the No. 2 and No. 3 horizons, as well as the Federal-Bassett ore zone. A second decline, No. 2 adit, has also been developed some 800 metres to the west. With the introduction of larger underground units, a third access to the mine, No. 4 adit, has been developed to replace No. 1 adit, which cannot be enlarged due to its proximity to the Murchison Highway.

The existing complex comprises engineering workshops, stores and administration buildings, together with the crushing and concentrating plants and associated ore stockpiles.

Concentrator

A new concentrator with a treatment capacity of 1 000 tonnes per day was commissioned at the end of 1966. In 1970 the addition of cassiterite flotation to the original sulphide flotation circuit improved recovery of tin without increasing plant throughput. A change in ore type mined, coupled with the introduction of automated process control and other operational improvements in 1973, increased capacity to 1 300 tonnes of ore per day.

The current capacity of 1 750 tonnes of ore per day was reached in 1974 with the introduction of the heavy media separation plant.

In 1978 a concentrate leach plant was commissioned. This improves the final grade of the product by consolidating output into a single high grade concentrate.

Work Force

The current (September 1978) total operation employs some 450 people. Of these, 95 are involved in the mining area, 135 in metallurgical operations (which include operation of the concentrator, assay and research). An additional 150 people are employed in engineering, maintenance and town services, while the remaining 70 are divided between administration, accounting, stores and security services.

Expansion Program

A \$20 million expansion program for Renison Limited was announced on 28 September 1978. The exploration program had confirmed and extended the Company's ore reserves by 2.17 million tonnes. Preparation of detailed engineering design and estimates for additions and modifications necessary to expand the milling capacity to 850 000 tonnes annually has been authorised. This would increase output by approximately 35 per cent.

Geology and Reserves

The geology of the Renison area consists of a folded and faulted series of sediments which have been intruded at depths by a large granitic body. There are two basic types of ore-bodies. The first is confined within major, steep, dipping fault zones and the other is located within the sedimentary strata where the mineralisation has selectively replaced carbonate beds.

The fault-confined ore-bodies, known as the 'Bassett' and 'Federal' ore-bodies, consist mainly of pyrrhotite, pyrite and quartz with lesser amounts of calcite, arsenopyrite, cassiterite, chalcopyrite and fluorite.

Exploration since 1965 has located several flat dipping carbonate replacement type ore-bodies adjacent to the steep dipping Federal and Bassett ore-bodies. These are confined to two carbonate-rich rock units separated by 50 metres of shales. Those in the uppermost carbonate band are collectively known as the No. 2 Horizon ore-bodies. Ore-bodies in the lower mineralisation consist mainly of pyrrhotite with some secondary carbonate and quartz and lesser amounts of cassiterite. Minor quantities of talc, actinolite and chlorite are also present.

Cassiterite is the predominant tin mineral in both ore-bodies, occurring either as discrete grains or clusters in the 5 to 200 micron (1 micron = 0.001 mm) size range.

Ore reserves at June 1978 stood at 13.7 million tonnes (1.14 per cent tin) with another 11.5 million tonnes (1.07 per cent tin) classified as possible ore.

Exploration

A variety of modern exploration techniques are extensively employed both on the surface and underground in an endeavour to delineate ore reserves. Exploration is currently being undertaken over 300 square km of rugged country in western Tasmania, much of it in the form of joint ventures with other major mining companies.

Mining

Underground operations are fully mechanised using rubber-tyred, diesel-powered equipment. The underground drives are 4.5 metres in height by 5.0 metres in width and are large enough to accommodate vehicles and water, air and electrical reticulation systems. The rock is highly competent and very little artificial roof support is needed.

Development

Three boom Jumbo drills, powered by compressed air, are used for drilling the three-metre long blasting holes that are charged with ANFO, an ammonium nitrate-fuel oil explosive. Charges are detonated electrically. The broken rock is loaded by diesel-powered front end loaders into 20-tonne capacity diesel-powered trucks. These haul the waste rock to the stopes (underground chambers formed in ore production areas) where it is used as backfill. Any surplus rock is hauled to the surface. As the drives advance, the road surface is graded to improve tyre life. Some 25 km of underground roads are currently maintained by the grader.

Stoping

The cut and fill stoping method is used in all ore-bodies. In the more flatly dipping No. 2 Horizon lodes, pillars of ore are left to provide roof and hanging wall support and to limit the roof spans.

Rock drills on two boom Jumbos or crawler mounted booms drill three-metre long holes either horizontally or inclined upwards at 55°. These are charged with ANFO and fired electrically. The broken ore is taken to the surface stockpile using 35-tonne capacity diesel trucks. Vehicle access to the stopes is by means of short crosscuts off the main decline system.

Ventilation

For each tonne of ore mined, approximately 10 tonnes of forced air is required to dilute exhaust from the diesel engines of vehicles, to clear blasting fumes and dust, and to provide cool working conditions. Air quality is regularly tested to ensure acceptable limits of purity.

Special purpose diesel engine vehicles are used underground at all times owing to the dangers of using a volatile fuel such as petrol in an underground situation.

Pumping

Approximately 7 000 litres of water per minute are pumped from the mine. This is equivalent to 3.7 tonnes of water per tonne of ore mined. As the mine deepens, this quantity is expected to increase.

Mine Planning

The responsibility for investigating new haulage and stoping methods lies with the Mine Planning Section. Long term ventilation requirements are also assessed using a computer network analysis program. Routing work includes the evaluation of new underground vehicles and the design of new items of equipment. Staff from both the Engineering and Geology Sections are involved in planning the future development of the mine.

Surveying

The Survey Section performs all underground and surface surveying. Directions for the declines, rises and other excavations are marked out and advances in the stopes and headings plotted. In addition to routine work, new prospecting areas are surveyed and tied into the mine grid. Equipment used includes a geodimeter and a theodolite. Survey staff have access to a computer to speed up calculations.

Ore Treatment

Tin occurs predominantly as cassiterite grains of less than 150-micron diameter in Renison ore. Although pyrrhotite is the most common sulphide mineral, there are also minor amounts of chalcopyrite, pyrite, arsenopyrite, marcasite, sphalerite and galena. Dolomite, siderite, quartz and other silicates constitute the remaining gangue.

Due to the high sulphide content and intimate cassiterite—sulphide association, recovery of fine grained cassiterite at Renison is a difficult metallurgical operation. Currently, 600 000 tonnes of ore per year are treated at an average head grade of 1.3 per cent tin.

Crushing & Storage

Because the treatment characteristics of the two basic types of ore-bodies (fault confined and carbonate replacement types) are different, freshly mined ore is selectively dumped on one of two surface stockpiles. Reclaimed by a front end loader, it is fed to the crushing plant

in such a way as to achieve a degree of blending. Three stages of open circuit crushing reduce the ore from 750 mm to 15 mm maximum particle diameter at a rate of over 300 tonnes per hour; operations are directed from a local control panel. The crushed ore is then belt conveyed and stored in a 4 000-tonne capacity concrete bin prior to being subjected to a fourth stage of crushing to reduce it to 12 mm maximum diameter. It is then fed at a rate of 80 tonnes per hour to the heavy media separation plant.

Heavy Media Separation

At this point there is sufficient liberation of the siliceous gangue to enable an 18 per cent weight reduction in a heavy media cyclone separation. Fines less than 0.5 mm are screened out and the oversize spilt into two fractions of different densities in a pair of Dyna Whirlpool cyclone separators, using Ferro-Silicon as the medium. The light 'floats' fraction contains little tin and is rejected to the stockpile for use as underground fill and for paving roads. The heavier 'sinks' fraction contains 99 per cent of the sulphides and flotation must be used to remove them from the other minerals. This is essential for efficient operation of subsequent classification and gravity separation, due to the high specific gravity of sulphide minerals. Instrumentation is comprehensive and includes nuclear weightometers and density gauges, all monitored from a central control room.

Primary Grinding

The sinks and fines from heavy media separation are reduced to less than 300 microns diameter in two stages. The sinks are reduced to less than 5 mm in a closed, wet rolls crushing circuit. This product joins with the fines from the heavy media separation plant and the mixture is ground in a 2.45 m x 3.2 m rubber-lined overflow ball mill in closed circuit with 12 polyurethane wedge-bar screens. Flows within the circuit are accurately monitored and controlled by a computer located in the central control room.

Great care is required to prevent over-grinding of the cassiterite grains. Preferential liberation of the cassiterite occurs, and early removal from the grinding circuit is essential. For this reason, fine screens are employed for closed circuit classification.

Sulphide Flotation

About 60 per cent of the weight of ground ore occurs as sulphides, which are removed by froth flotation in a bank of five Agitair rougher units. The sulphides are floated in an acid circuit using copper sulphate as an activator, and a low homologue xanthate as a collector. The sulphide concentrate is refloated to drop out free cassiterite and then finely ground in a 2.45 m x 1.8 m ball mill closed with cyclones (rotation cylindrical screen) and wedge-bar screens, liberating cassiterite which is dropped out in a final recleaner flotation stage. A portion of the sulphide flotation concentrate is filtered and sold to be used for sulphuric acid manufacture; the remainder is pumped to the tailings dam.

Gravity Concentration

With most of the sulphides removed, the relatively heavy cassiterite can be separated from the lighter gangue minerals with high efficiency down to a size of around 30 microns. This is done by using spirals for the coarsest fraction and shanking tables for the finest range. Spiral and table tails are passed over a Reichert cone concentrator which scalps out a final low grade siliceous tailing. The cone concentrates are reground in another 2.45 m x 1.8 m ball mill closed with cyclones and wedge-bar screens before being returned to join the new feed to the section. Remaining sulphides are finally scavenged from the cassiterite concentrate in a precisely controlled batch flotation operation.

Cassiterite Flotation

All remaining pump streams are progressively sized in cyclones, the final stage being 40 mm polyurethane cyclones, which 'split' at approximately 3 microns. The finer material is discarded to the tailings dam while the coarser fraction is pumped to the cassiterite flotation section.

After flotation, concentrate assaying approximately 22 per cent tin is pumped to the concentrate leaching plant.

Concentrate Leaching

The gravity and flotation concentrates are blended and leached with 15 per cent sulphuric acid to dissolve carbonate minerals which lower the grade of both concentrates. They are diluted with water and then thickened twice to remove the dissolved minerals from the concentrate stream. A second batch flotation is performed before magnetics are removed from the concentrate prior to pressure filtration. The final concentrate assays about 50 per cent tin and is bagged, weighed, sampled and despatched to smelters in Sydney and Malaysia.

Tailings Disposal

Acid liquor from the leach plant is neutralised and combined with other mill residues and pumped approximately 2 km to storage ponds sealed by earth embankments. The clear water overflow from these tailings dams is regularly monitored for turbidity, heavy metal ions and acid radicals in order to comply with statutory environmental regulations.

Assaying and Research

Assaying

To assist operators, important concentrator process streams are sampled every two hours and assayed using an X-ray fluorescence spectrometer. Separate laboratories perform both quantitative and qualitative analyses on drill core, mill, research and water samples using a wide range of sophisticated techniques. Equipment available includes atomic absorption spectrophotometers, an additional X-ray fluorescence spectrometer, specific ion electrodes and meters, a colorimeter, and a polarograph as well as comprehensive facilities for wet analysis.

Research

Process design and optimisation, development of new techniques and equipment, commissioning, drill core testing and environmental impact are among the many responsibilities of the research department. Laboratory facilities are available for crushing, grinding, heavy liquid separation, flotation, coarse and fine gravity concentration and microscopic examination of products. Using sophisticated equipment, sizing to one micron or less can be achieved.

Computer facilities are also available on site, and are widely used.

Engineering Services

The Engineering Department provides services to all operating departments.

Skilled trades employed with the Department include draftsmen, maintenance fitters, welders, carpenters, electricians, plumbers, painters, diesel fitters, mechanics, machinists, and instrument fitters. A number of apprentices are also trained in all these trades in conjunction with the Apprenticeship Commission of Tasmania. Some personnel are also employed in semi-skilled classifications.

Service section responsibilities are structured into the areas of automotive and diesel equipment, electrical services, mechanical workshop, mill maintenance, instrumentation maintenance and housing and plant building maintenance.

The Automotive Section is responsible for a wide variety of rubber-tyred, diesel mining equipment, light service vehicles and passenger buses, as well as the more conventional company vehicles.

The Electrical Section services installations at voltages of between 240 and 44 000, including electric motors of up to 375 kW.

Mechanical workshops are equipped with a variety of machine tools, being responsible for the maintenance of mill plant, compressors, mine pumps and other mine equipment. The Automotive, Electrical and Mechanical Sections occupy a single covered area of some 1 500 square metres.

Mill maintenance is carried out in a separate workshop and covers the servicing of crushers, conveyors, ball mills, flotation cells and other mill plant and equipment. Testing, calibration and repair of computers, electronic data processing equipment and other process control instrumentation is also carried out.

The Engineering Department runs a section based in Zeehan, responsible for the maintenance of all Company housing and other town buildings, as well as plant buildings, offices and stores.

Skilled contract labour is hired as necessary to cope with new installations.

Administration

Non-operational services including accounting, payroll, personnel and employee welfare, industrial relations, shipping, sales, security services, supply and stores are provided by this department.

Since installation of computer terminal facilities at the Mine in 1974, the Administration Department's computer processing has been carried out on a large computer belonging to a computer bureau firm in Sydney. Access is by telephone line.

The Mine's supply section has a turnover of nearly \$3 million worth of stock items annually. The total cost of purchases, including stores, runs at nearly \$5 million annually. In addition, there is continuing expenditure on capital items.

The central store, used for stocks of portable items, forms part of the bulk storage area, comprising over 1,100 square metres of covered storage. Heavy components and assemblies are stored in a palletised rack system and handled by fork lift trucks. Bulky items such as steel, piping, timber etc. are stored in a separate adjacent compound area.

Shipping

Approximately 11 000 tonnes of concentrates are shipped out to Australian and overseas markets annually. While this is an appreciable tonnage, only a portion is suitable for true bulk shipment. The value of the product also renders bulk shipment inappropriate. Originally concentrates were moved by the conventional method for tin (hessian bags) but as tonnage increased, open head 44 gallon drums with lids came into use. These represented a considerable improvement over the bags in terms of both security and handling costs.

A recent compromise with bulk handling has been developed involving the use of 2-tonne returnable reinforced P.V.C. bags for Australian sales and 18.3 tonne capacity standard containers for overseas shipments.

Tin—Its Past, Present and Future

Tin was one of the very first metals to be used by man, bronze implements containing an alloy of copper and tin have been dated as early as 3500 B.C. Long before the Roman invasion of Britain, the Phoenician traders sailed to Cornwall in search of tin obtained from river and stream beds. They knew the British Isles as 'Cassiterides' (Tin Islands), a word derived from early Greek writers who were aware that tin was found somewhere off the coast of Western Europe. This is where the name 'Cassiterite' for the partly transparent, pale brown mineral mined and concentrated at Renison, originated.

Until the 19th Century, the metal was used chiefly for making pewter utensils for domestic, ecclesiastical and civic use. In its modern form, pewter contains around 95 percent tin, the remainder being mainly copper. Today, pewter is again in high demand and is much valued as being both functional and decorative but the greater proportion of tin is used in the manufacturing industries for plating and solder.

Because tin melts easily, alloys readily and resists chemical attack as well as being non-toxic, over 40 per cent of production is absorbed by the tin plate industry to be used mainly for canning (the weight of the tin coating being an almost insignificant fraction of the total weight of the can and the contents it protects) and 25 per cent for the production of solder for use in electronics, motor vehicle manufacture and canning.

World tin consumption is expected to grow slowly but steadily over the next decade with established markets becoming stronger and new applications being developed. The same cannot be said for world tin production which is expected to decrease slowly as the reserves in some traditional mining areas become depleted. The ore reserves found to date will ensure that Renison will be a major contributor to Australia's tin requirements for many years to come.

Zeehan

A Town Reborn

Zeehan, an old silver mining centre, once had a population of over 10 000 people and was the third largest town in Tasmania, boasting 24 hotels, its own stock exchange and a 1 000-seat theatre. However, by 1964 the population had dwindled to less than 600 and most of the former dwellings had been demolished.

With the rapid development of the Renison mine in the late 1960's, new housing facilities were required for the increased workforce of 450 people and Zeehan, a mere 16 km away, was an ideal site.

Zeehan is now a thriving community of some 1 800 people and tourism is increasing due to the historic background of the town, as well as its picturesque location at the foot of Mount Zeehan. There are now two hotels, a motel, a modern supermarket, a number of smaller shops, and a primary school. Recreational facilities are available covering a wide range of activities. A modern high school is located at Queenstown, 40 km away, which also has the district hospital and a community college for various forms of technical and further education.

Recreation

The social side of life is well catered for. Tennis, Australian Rules football, golf, rugby, cricket, soccer, basketball, badminton, and athletics are among some of the thriving sports. On the cultural side, the Crafts Association, Library, and Zeehan Amateur Theatrical Society (ZATS) are well supported.

The nearby coast provides excellent sea fishing and skin diving, while nearer to town, bushwalking, mountain climbing and trout fishing are popular.

One of the more pleasant features is that the rest of Tasmania is within easy driving distance through magnificent mountains and lakes, historic towns and settlements that rival scenery anywhere in the world.

Housing

Street construction, water supply and sewerage were undertaken by the Company and the facilities handed over to the local municipal authority for operation. Both the water supply and sewerage services have since been considerably enlarged to cater for additional Renison housing.

In addition to accommodation for some 140 single men, the Company has built over 200 modern family housing units of up to four bedrooms in Zeehan since 1965. Rental is nominal and a number of services are subsidised.

Employee Welfare

The Company has actively encouraged and largely financed many community developments such as the golf course, tennis courts, badminton and basketball hall, and sports ground.

Because of limited shopping facilities previously available, the Company constructed a large modern supermarket in Zeehan and this was leased out to a Burnie retail company. The result of this venture is that employees and townsfolk generally are now enjoying the benefits of increased competition in the form of lower prices for food and clothing lines, and 'one stop' shopping.

The Company assisted the Zeehan Medical Union with construction of modern facilities for medical, dental, casualty and child health services. In addition, the Union's operations are subsidised on a regular basis. The Union also runs a chemist shop which stocks the usual range of requirements.

Generous superannuation schemes have been established for both hourly paid and staff employees. A Company plant nursery in Zeehan grows shrubs and trees for local gardens, nature strips and parks.

FISHERIES

General

The Tasmanian saltwater fishing industry involves about 1 460 licensed fishermen and crew who operate over 650 licensed fishing vessels from the State. The species which comprise the annual catch are not only scale fish but also include elasmobranchs (sharks), molluscs (scallops, oysters, abalone) and crustaceans (southern rock lobster).

In 1976-77 the catch of fish, molluscs and crustaceans totalled 6 561 tonnes which was 110 tonnes down on the 1975-76 figure of 6 671 tonnes and 56 per cent below the record catch for 1973-74 when 14 828 tonnes were harvested. The high catch for 1973-74 was mainly due to the establishment of a fish protein factory at Triabunna which ceased operations in mid-1974.

The Fisheries Development Authority controls saltwater fisheries and the Inland Fisheries Commission controls freshwater fisheries. Most freshwater fish are caught for sport but two species (eels and whitebait) are caught for commercial purposes.

Commercial fishing for whitebait began in 1941 and reached a peak in 1947 when over 450 tonnes were caught. Since 1950 the catch has gradually declined to such a degree that no catches of whitebait were reported in 1974-75. A closed season followed in 1975-76 and in 1976-77 only 342 kilograms were caught.

Rainbow trout are raised commercially on a trout farm at Bridport. There are rainbow and brown trout in Tasmanian lakes and rivers (introduced as exotic species) but these may only be fished for by licensed sportsmen and may not be sold.

A commercial freshwater fishery for the short-finned eel was established in 1965. The catch in 1976-77 was 11 560 kilograms which was 28 per cent below the catch of 15 968 kilograms in 1975-76.

Fish Varieties and Species

The following table lists the main Tasmanian commercial fish varieties and species with their code numbers. The code numbers are prepared on behalf of the Federal/State Fisheries Conference by the Fisheries Division of the Federal Department of Agriculture.

Main Commercial Fish Varieties, Species and Code Numbers

Variety	Species	Code number	Variety	Species	Code number
Eel	<i>Anguilla australis</i>	035	Flathead	<i>Neoplatycephalus fuscus</i>	615
Whitebait	<i>Lovettia sealii</i>	076		<i>N. richardsoni</i>	616
Rainbow trout	<i>Salmo gairdnerii</i>	101		<i>N. speculator</i>	617
Flounder	<i>Fam. Bothidae</i>	151		<i>Trudis bassensis</i>	621
				<i>Leviprora laevisgata</i>	625
Cod	<i>Physiculus barbatus</i>	201	Shark	<i>Mustelus antarcticus</i>	651
Tuna	<i>Thunnus maccoyii</i>	301		<i>Galeorhinus australis</i>	655
	<i>T. alalunga</i>	303	Garfish	<i>Hyporhamphus melanochir</i>	712
	<i>Katsuwonus pelamis</i>	315			
Mackerel	<i>Auxis thazard</i>	334	Southern rock lobster	<i>Jasus novaehollandiae</i>	780
Snoek (barracouta)	<i>Leionura atun</i>	335		<i>Ostrea angasi</i>	831
				<i>Crassostrea gigas</i>	832
Mullet	<i>Mugil cephalus</i>	351	Oyster	<i>Pecten meridionalis</i>	835
	<i>Aldrichetta forsteri</i>	370	Scallop	<i>Equichlamys bifrons</i>	836
Trevally	<i>Caranx georgianus</i>	402		<i>Mimachlamys asperimus</i>	837
Trevalla, deep sea	<i>Hyperoglyphe porosa</i>	451		<i>Notohaliotis ruber</i>	845
Salmon	<i>Arripis trutta</i>	490	Abalone	<i>Schismotis laevisgata</i>	846
Morwong	<i>Nemadactylus spp.</i>	501			
Trumpeter	<i>Latris lineatus</i>	535			
	<i>Latridopsis forsteri</i>				

Fisheries Statistics

Source of Data and Method of Presentation

Statistics presented in this section have been supplied principally by the Tasmanian Fisheries Development Authority. In the preparation of fisheries production statistics, the quantities are generally in terms of the form in which the catch is taken from the water. For example, the statistics of fish production are in terms of 'estimated live weight' which is calculated from landed weights by using conversion factors for the various species. These conversion factors allow for the fact that the quantities of fish reported are frequently in a gutted, headed and gutted, or otherwise reduced condition. Crustaceans are reported on a 'whole weight' basis and molluscs (edible) on a 'gross (in-shell) weight' basis.

The actual edible yield varies depending on types of fish and methods of preparation. Barracouta yield about 51 per cent of live weight when filleted, and shark about 60 per cent when headed and gutted. The edible flesh in molluscs represents only a small portion of the in-shell weight. Approximately 1 kg of scallop flesh equals 4.5 kg in-shell weight and 1 kg of abalone flesh equals 2.25 kg in-shell weight.

The catch is generally defined as that landed in Tasmanian ports, regardless of whether it is caught in Tasmanian waters or not, or whether it is caught by Tasmanian fishermen or not. Shark, southern rock lobster and other fish taken by Victorian based fishermen in Tasmanian waters, but landed in Victoria, are included in the Victorian catch and excluded from Tasmanian figures on the basis that the catch influences the Victorian rather than the Tasmanian economy.

Details of production refer only to recorded commercial production. In view of the importance of amateur fishermen in certain types of fishing, details shown cannot be taken as representing the whole catch. In addition, it is likely that the figures shown understate, to some extent, the full commercial catch since no information is available on fish taken for sale by persons not licensed as professional fishermen.

Employment and Boats

Persons Engaged and Boats

The following table shows details of persons and boats employed in the taking of fish, crustaceans and edible molluscs. The data are derived from boat registration records of the Tasmanian Fisheries Development Authority. The term 'number of crew' refers to the usual number of crew on registered fishing vessels and lacks the precision of the concept 'average number employed' used in statistics of other production sectors. Many of the fishermen operate part-time only, and may normally follow other occupations.

Fisheries: Number and Value of Boats, Number of Crew, etc.

Particulars	1973 (a)	1974 (b)	1975 (c)	1976 (c)	1977 (c)
Number of boats engaged (d)	594	616	607	640	655
Value of boats engaged (d)	8 611	12 546	13 060	14 918	15 464
Average value per boat	14 497	20 367	21 516	23 309	23 610
Number of tender boats	345	400	395	405	402
Total value of fishing gear	728	1 261	1 255	1 379	1 438
Value of fishing gear per boat	1 226	2 095	2 068	2 155	2 195
Number of crew	1 268	1 343	1 347	1 439	1 466
Number of boats according to size (e) —					
Under 6 metres	127	147	149	170	181
6 and under 9 metres	82	88	81	83	89
9 and under 12 metres	129	116	117	118	116
12 and under 15 metres	151	157	150	148	142
15 and under 18 metres	77	77	78	83	86
18 and under 21 metres	15	15	15	17	19
21 and under 26 metres	9	8	10	13	14
26 and under 30 metres	1	4	4	5	5
30 metres and over	3	4	3	3	3

(a) Based on figures collected in 1969 adjusted for new registrations and de-registrations.

(b) Complete details collected.

(c) Based on figures collected in 1974 adjusted for new registrations and de-registrations.

(d) Excludes tender boats.

(e) Size groupings, originally in feet, have been directly converted to the nearest metre.

The boats used for the estuarine fisheries are mostly small vessels, propelled by diesel or petrol motors of low power. The offshore vessels range in length from 9 metres to over 30 metres and almost invariably are powered by diesel engines. Refrigeration of the catch at sea is becoming more common, the four main types being ice box, ice cooling, brine tanks and dry refrigeration; almost all boats have wells or deck tanks which serve to keep the catch alive, e.g. southern rock lobster or abalone.

Production

Fish Catch

The following table shows the production of certain types of fish caught in Tasmania for a five-year period. The fish types appear in the table without any further description to identify the particular species but a specification of the more common species for each type is given earlier in this section. The figures, derived from fish buyers' transactions, do not reflect the actual production from Tasmanian waters due to: (i) landing at Tasmanian ports of fish caught in interstate waters; (ii) landing at interstate ports of fish caught in Tasmanian waters; and (iii) direct sales by fishermen.

Fish: Production by Type
(Estimated Live Weight, Tonnes) (a)

Type	1972-73	1973-74	1974-75	1975-76	1976-77
Australian salmon	461	371	631	473	783
Barracouta (snoek)	915	598	760	143	37
Cod	4	2	2	1	2
Flathead	39	73	23	32	29
Flounder	14	10	18	5	3
Garfish	36	50	40	35	28
Morwong	7	8	14	35	59
Mullet	7	7	5	4	6
Shark	497	1 187	651	1 238	1 130
Trevalla, deep-sea	70	100	75	59	56
Trevally					
Trumpeter	7	7	4	2	1
Tuna	40	n.a.	135	13	25
Other	168	(b) 7 471	512	189	203
Total	2 265	(b) 9 884	2 870	2 229	2 363

(a) Estimated live weights are calculated from landed weights by conversion factors since quantities of fish are frequently reported in a gutted, headed and gutted, or otherwise reduced condition (e.g. barracouta and shark).

(b) Used mainly for input to a fish protein factory at Triabunna which closed down in mid-1974.

Crustaceans and Molluscs

In terms of value, the principal items in the Tasmanian catch are abalone and southern rock lobster (crayfish). The next table shows details of production of crustaceans and molluscs:

Crustaceans and Molluscs: Production by Type

Type	1972-73	1973-74	1974-75	1975-76	1976-77
CRUSTACEANS (Whole weight, tonnes)					
Southern rock lobster	1 583	1 514	1 525	1 229	1 177
MOLLUSCS (In-shell weight, tonnes)					
Abalone	2 172	2 060	2 108	2 429	2 368
Scallops	515	1 158	1 261	690	498
Oysters	147	207	105	94	149
Squid	154	5	6	1	6
Total	2 988	3 430	3 480	3 213	3 021

Development of the Tasmanian abalone fishery dates from 1964 when divers commenced taking abalone for export. The 1963-64 catch was only 33 tonnes. In 1976-77 the catch was 2 368 tonnes which is 1 120 tonnes below the record 1970-71 abalone harvest of 3 488 tonnes. Currently, in terms of value, abalone is the most important species in the Tasmanian catch.

Comparison with Other States

Rock Lobster: Total production of rock lobster in Australia during 1976-77 was 12 700 tonnes of which Tasmania produced nine per cent. The main producing states were Western Australia (72 per cent) and South Australia (15 per cent).

Abalone: In 1976-77 Victoria overtook Tasmania as the leading producer of abalone in Australia. Victoria produced 2 575 tonnes (in the shell), or 41 per cent of the total Australian production of 6 320 tonnes, while Tasmania produced 2 368 tonnes (37 per cent). (In 1975-76 Tasmania contributed 46 per cent of Australia's production.)

Scallops: For many years Tasmania was the only state in Australia with a commercial scallop fishery; in 1955-56 Tasmania was joined by Queensland, but continued to retain its dominant position in the industry. However, in 1963 Tasmanian fishermen started a Victorian fishery in beds known to exist in Port Phillip Bay and the new site in its first year (1963-64) produced more than twice the quantity of the Tasmanian fishery. No scallops were dredged from Tasmanian waters in 1970-71, and only 52 tonnes in 1971-72, but following the discovery of new beds in Bass Strait the Tasmanian catch increased to 1 261 tonnes in 1974-75. Production in Tasmania fell to 498 tonnes in 1976-77, while Victoria produced 2 888 tonnes, 65 per cent of the Australian total of 4 431 tonnes.

Catch of Fish Landed at Fishing Ports

The table that follows shows the proportion of fish landed at Tasmanian fishing ports. The information relates to port of landing only, and not to the area in which the catch was made.

**Proportion of Fish (Live Weight) Landed at Each Port
(Per Cent)**

Port	1975-76	1976-77	Port	1975-76	1976-77
Derwent & Channel—			Bass Strait & Islands—		
Dover	2.6	0.4	Bridport	2.8	2.6
Hobart	7.3	2.8	Currie	—	0.3
Kettering	6.5	4.2	Lady Barron	0.6	5.6
Margate	3.2	1.4	Port Sorell	25.3	31.0
Southport	0.2	—	Smithton	2.0	1.9
			Stanley	16.4	12.5
			'Tamar' (a)	3.1	2.3
			Wynyard	3.5	1.3
Total	19.8	8.7	Total	53.7	57.4
East Coast and Peninsula—			West Coast—		
Bicheno	14.2	10.1	Strahan	0.2	3.8
Coles Bay	0.1	0.8			
St Helens	1.0	2.1			
Triabunna	5.5	10.6			
Dunalley	3.3	1.8			
Port Arthur	2.2	4.7			
Total	26.3	29.9	Total Tasmania	100.0	100.0

(a) Launceston, Beauty Point and other Tamar ports.

The next table shows the proportion of the total fish catch landed each month:

**Proportion of Fish (Live Weight) Landed in Each Month
(Per Cent)**

Month	1975-76	1976-77	Month	1975-76	1976-77
July	1.3	5.3	January	26.1	10.7
August	1.7	3.0	February	10.9	14.0
September	4.4	2.9	March	14.0	14.1
October	7.1	1.7	April	9.9	12.7
November	3.1	5.8	May	11.8	15.9
December	6.3	3.9	June	3.4	9.9

Value of Production—Fishing

The table that follows gives details of gross values of fishery products. (For definition see later section 'Value of Production'.)

**Fisheries: Gross Value of Production
(\$'000)**

Particulars	1972-73	1973-74	1974-75	1975-76	1976-77
Fish (a)	546	1 235	768	1 108	1 672
Crustaceans (b)	3 203	3 338	3 476	3 670	4 702
Molluscs	1 989	2 440	2 683	3 733	5 339
Total	5 739	7 014	6 928	8 511	11 713

(a) Includes value of seaweed harvested for production of alginate.

(b) Mainly southern rock lobster but includes crabs.

Marketing

In general terms, it can be said that production of fish, crustaceans and molluscs from the Tasmanian fisheries far exceeds the demand generated by the relatively small State population; it follows, therefore, that the industry is largely dependent on its ability to find export markets, both interstate and overseas, and this raises the problem of preserving a perishable product. The problem of preservation has three aspects: (i) at sea; (ii) on shore; and (iii) in transit to market. Of the 616 registered fishing boats in 1974, 201 boats (i.e. 33 per cent) had refrigeration plants of various kinds. In addition, some catches, e.g. southern rock lobster, can be kept alive in boat wells. Cold storage facilities ashore serve to hold the catch before its despatch to interstate and overseas markets while actual exports are carried by air, by refrigerated trailer and container, on the roll-on roll-off ferries and in the refrigeration chambers of conventional ships. The following table shows the value of exports and imports of fishery products. The fact that Tasmania has an exportable surplus, yet nevertheless imports some fishery products, is chiefly due to differences in type; the imported varieties include canned sardines, anchovies, oysters, crabs, etc. together with frozen, salted or smoked varieties mainly of European, New Zealand, Canadian or South African origin. The establishment of the Tasmanian Fisheries Development Authority (see the next section) to promote and develop Tasmania's fishing industry should, if successful, result in significant changes in the industry. Increased catches will have to come from fish types not currently subject to heavy exploitation and this will be reflected in the types of fish being marketed.

**Fishery Products: Value of Exports and Imports
(\$'000)**

Particulars	1972-73	1973-74	1974-75	1975-76	1976-77
EXPORTS					
Fish (a)—Overseas	27	64	4	21	46
Interstate	482	660	573	422	583
Southern rock lobster—					
Overseas	439	863	802	339	373
Interstate	1 923	2 988	2 371	1 440	2 127
Molluscs—Overseas	1 117	1 780	2 030	2 391	2 640
Interstate	349	849	551	325	853
All types—Overseas	1 583	2 707	2 836	2 751	3 058
Interstate	2 753	4 497	3 495	2 187	3 563
Total	4 336	7 204	6 333	4 939	6 621
IMPORTS					
Fish—					
Fresh and frozen—					
Overseas	60	65	66	14	116
Interstate	172	130	107	94	112
Preserved in tins—					
Overseas	99	247	265	101	210
Interstate	142	225	227	302	335
Other (b)—Overseas	—	1	1	1	1
Interstate	28	31	21	16	34
All types—Overseas	160	313	332	116	328
Interstate	342	386	355	412	481
Total	502	699	686	528	809

(a) Includes fresh and frozen fish and fish preserved in tins.

(b) Includes smoked, salted and potted fish, extracts and caviar.

Tasmanian Fisheries Development Authority

General

The management of Tasmanian fisheries in tidal waters is the responsibility of the Minister for Primary Industry under the *Fisheries Act 1959*. Prior to December 1977 that Act was administered by the Fisheries Division of the Department of Agriculture. Administrative responsibility is now vested in the Tasmanian Fisheries Development Authority. This Act also provided for the Sea Fisheries Advisory Board to advise the Minister on matters related to fisheries in tidal waters.

The Tasmanian Fisheries Development Authority was established on 1 December 1977 under provisions of the *Fisheries Development Act 1977*. The Authority has the following objectives:

- (i) The promotion and development of the fishing industry that is carried on in or from Tasmania.
- (ii) The maintenance of proper standards with respect to fish and fish products intended for consumption in, or for export from, Tasmania both as to quality and as to the methods of handling, processing, storage, packaging and transport.
- (iii) The undertaking of research, exploratory and experimental work related to the management of the living resources in the waters around Tasmania and to the fishing industry of Tasmania.

Fisheries Promotion and Development

The Authority has begun implementing a formal development plan covering resource assessment, marketing and training.

The main stimulus to development has been through financial incentives made available to those engaged in the fishing industry. This has been effected in association with the

Agricultural Bank by the introduction of the Fisheries Finance Plan. In support of this Plan, the Authority is developing advisory services to the fishing industry to assist in expansion and diversification of the catch. This involves programs of practical training, extension, communication and advice.

In conjunction with fishing industry organisations, the Authority produces the magazine *Fintas* which is distributed bi-monthly to all fishermen and processors engaged in the Tasmanian fishing industry, as well as to State and Federal Government departments, fishery authorities and industry organisations.

The marketing structure in Tasmania has been geared primarily to the processing and exporting of rock lobster and abalone. In recent years there has been an increasing market interest in the development of other types of fishing. In its efforts to stimulate development of the industry, the Authority has identified a number of problem areas and the efforts of its Market Development Division are mainly directed towards the following:

- (i) Provision of assistance in the development of new markets for Tasmanian fish, and provision of advice to the industry on possible alternative catches.
- (ii) Dissemination to the industry of information on market prices and market trends.
- (iii) Development of codes of practice for handling, processing, storage and distribution of fish in Tasmania.
- (iv) The education of Tasmanian consumers as to the main ways in which local fish can be prepared and presented, and promotion of Tasmanian fish both locally and interstate.
- (v) Conduct of a research study into the marketing of fish in Tasmania and provision of advice to the industry on possible ways in which the marketing structure may be improved.
- (vi) Research into the situation of and outlook for fisheries which have a potential for development.

Research

Research and development work of the Authority centres on demersal (bottom living) fish and aquaculture.

The demersal fish program concerns species such as morwong, flathead, gemfish, whiptail, dories and deep sea trevalla. Trawl-ground mapping has been carried out by chartering commercial vessels and was to be extended during 1978-79 by using the Authority's research vessel *Challenger*. Monitoring of the commercial fisheries for the fish mentioned above and also of established rock lobster and abalone fisheries continues as a significant part of the program. A Statewide survey of the fish in Tasmanian estuaries and bays was nearing completion in August 1978.

Oysters present good potential for developing the aquaculture industry. Emphasis is being placed on overcoming the problem of poor supplies of oyster spat. Results of past experimental work are being applied in the growing mussel aquaculture industry. The Authority has received a grant of \$53 000 for 1978-79 from the Federal Government to be used in the development of small-scale invertebrate fisheries in Tasmanian waters.

Fisheries Control

The management and conservation of existing fisheries, both commercial and recreational, is an integral part of the Authority's responsibilities. Patrol and inspection duties are carried out by Authority officers throughout the State. As well as Tasmanian fisheries, certain Australian waters and the Tasmanian section of the continental shelf are patrolled. In addition, the provisions of the Australia-Japan Fishing Agreement are enforced and regular inspections of Japanese fishing vessels are made when these enter the port of Hobart. For fisheries control and patrol purposes, the Authority has two long-range vessels, one measuring 12.2 metres and the other 14.5 metres, plus five high-speed runabout type vessels. Two new patrol vessels, one measuring 15.5 metres, were expected to be operational by the end of 1978. In addition, frequent use of light aircraft is made to assist in patrol duties.

A new district station has been established at Smithton, to cover the far North-West Coast and King Island areas. The Authority also has district offices at Hobart, St. Helens, Launceston, Burnie and Sorell.

The Authority is responsible for issuing licences to Tasmanian-based saltwater fishermen. The types and numbers of licences in force during 1977-78 were as follows: fishing boat licences, 661; commercial crayfish pot licences, 375; commercial scallop licences, 98; fisherman's licences, 731; non-commercial crayfish pot licences, 5 151; and non-commercial diving licences, 1 841.

Appendix

VALUE OF PRODUCTION, PRIMARY INDUSTRIES

Introduction

The statistics contained in this appendix are compiled annually and include gross and local values of production for agricultural commodities, forestry, fishing and hunting but exclude details relating to mining.

Forestry, Fishing and Hunting

Estimates of gross and local value of production are calculated for forestry, fishing and hunting and are included with statistics for agricultural commodities in a table below. Because of difficulties and the cost involved, it is not practicable to collect statistics on an integrated economic census basis for these industries and therefore comparisons can not be made with the mining, manufacturing, etc. industry sectors.

Agriculture

It has not been practicable until recent years to collect annual statistics of farm income and expenditure direct from farmers. Instead, estimates have been made of the gross and local values of farm production each year, the basis of these estimates being, in the main, commodity data obtained from the census of agricultural holdings conducted annually on 31 March. Notes below indicate the scope of these estimates and sources of information as well as definitions of the terms *gross* and *local* value of production.

Advances in computer processing have now made it feasible to conduct, on a sample basis, an annual agricultural finance survey and results of these surveys have already been published by the Australian Statistician for the years 1971-72 to 1976-77 and are also included in this publication (see Chapter 7). These surveys are based on new data concepts which enable comparisons to be made between the agricultural sector and other industries such as mining, manufacturing, etc., which are included in integrated economic censuses. 'Value added' for the various industry sectors covered by the integrated economic censuses are compared with value added for the agricultural sector (based on agricultural finance surveys) in the section 'Integrated Economic Censuses' in Chapter 18.

With the introduction of these annual surveys, the 'Value of Production' series of statistics has been scaled down so that as from 1975-76, only estimates of *gross* and *local* value of production of farm products have been produced, i.e. *net* values of production have not been calculated. No estimates of net value of production for 1974-75 or earlier years are included in this publication, but are available upon request.

Definitions

The following uniform definitions, where appropriate, are employed for primary industries:

- (i) *Gross Value of Production* is the value placed on recorded production at the wholesale prices realised at the principal markets. In cases where primary products are consumed at the place of production, or where they become raw material for a secondary industry, these points of consumption are presumed to be the principal markets. Subsidies and bounties paid by the State and Federal Governments to primary industries are, in general, included in gross value of production.
- (ii) *Marketing Costs* include freight, cost of containers, commission and other charges incidental thereto.

Sources of Information

Primary Production, Agriculture

The data used are those concerning quantity of agricultural production (supplied principally by farmers, etc.) together with information collected from various sources on prices realised in the principal markets for different products and the costs of marketing these products. Price and cost data are obtained from statutory authorities (e.g. Australian Wheat Board), market reports, special returns collected from wholesalers, brokers, auctioneers, etc., and from overseas and interstate trade statistics.

Primary Production, Other

(i) *Hunting*: Principal data are derived from export of skins and information on the annual mutton bird catch.

(ii) *Forestry*: Principal value data are available from the annual factory census, since forestry products are the basic raw material for sawmills, newsprint and paper mills, etc.

(iii) *Fishing*: Quantity data and prices are collected from fish wholesalers and agents.

Period Covered

Primary, Agriculture: Generally the year ended 30 June but includes current season's production harvested after 30 June, e.g. potatoes.

Primary, Other: Year ended 30 June.

The Agricultural Industry

The Agricultural industry, for value of production purposes, is divided into: (i) crops; (ii) livestock slaughterings and other disposals; and (iii) livestock products.

Crops

The following table shows gross values for the crops sector:

Crops: Gross value (a)
(\$'000)

Crop	1972-73	1973-74	1974-75	1975-76	1976-77
Cereals for grain.....	1 896	2 916	3 164	2 261	3 999
Legumes mainly for grain.....	147	376	525	163	182
Crops for hay (a).....	426	394	530	146	478
Orchard tree fruit.....	17 312	14 473	14 910	13 138	12 137
Berry and small fruit.....	960	949	1 406	794	944
Vegetables for sale for human consumption.....	10 863	13 374	15 071	17 447	23 390
Other crops (b).....	3 953	4 765	3 064	4 450	7 975
Pasture harvested for hay.....	4 405	8 839	10 470	5 628	8 478
Pasture harvested for seed.....	79	562	269	74	151
Total.....	40 041	46 649	49 409	44 101	57 734

(a) Excludes crops and pasture harvested for green feed or silage.

(b) Excludes harvested pasture.

The next table shows quantity and value details for the main items comprising the crops sector. Also included in the table is the average value per unit of production.

Crops: Gross Value 1976-77

Crop	Unit of quantity	Production	Gross value	
			Per unit	Total
Crops (excluding pasture harvested)—			\$	\$'000
Cereals for grain—				
Barley.....	tonne	24 571	111.07	2 729
Oats.....	tonne	8 801	107.61	947
Wheat.....	tonne	3 929	82.00	322
Total cereals for grain.....	..	..	..	(a) 3 999

Crops: Gross Value 1976-77—continued

Crop	Unit of quantity	Production	Gross value	
			Per unit	Total
			\$	\$'000
Legumes mainly for grain—				
Beans, navy and horse	tonne	166	265.06	44
Peas, field	tonne	765	180.15	138
Total legumes mainly for grain .....	..	..	..	182
Crops for hay (b)	tonne	9 588	49.81	478
Fruit—				
Orchard tree fruit—				
Apples	tonne	71 781	163.50	(c) (d) 11 736
Pears	tonne	1 434	195.26	280
Total orchard tree fruit .....	..	..	..	(a) 12 137
Berry and small fruit—				
Currants	kg	575 110	0.55	316
Loganberries	kg	222 127	0.57	126
Raspberries	kg	562 967	0.58	328
Strawberries	kg	84 187	1.55	130
Total berry and small fruit .....	..	..	..	(a) 944
Vegetables for sale for human consumption—				
Beans, French and runner	tonne	10 996	162.60	1 788
Peas, green (ex-shell) (processing only)	tonne	31 632	212.16	6 711
Potatoes	tonne	112 269	83.33	9 355
Total vegetables for sale for human consumption .....	..	..	..	(a) 23 390
Other crops—				
Hops (dry weight)	tonne	1 330	1 694.57	2 254
Other .....	..	..	..	5 721
Total other crops .....	..	..	..	7 975
Total (excluding crops from pasture) .....	..	..	..	49 105
Pasture (e) harvested—				
Pasture harvested for—Hay	tonne	334 961	25.31	8 478
Seed	kg	395 687	0.38	151
Total crops from pasture .....	..	..	..	8 629
Total all crops .....	..	..	..	57 734

(a) Includes other crops not specified in the table.

(b) Excludes pasture for hay.

(c) Adjusted for Government Stabilisation Subsidy: plus \$527 358 for apples and minus \$50 for pears.

(d) Includes payments under the *Apple Industry (Assistance) Act* of \$78 000.

(e) Includes lucerne.

Average Unit Gross Values: In the next table, average unit gross values for the principal crops are shown for a five-year period. The unit values have been calculated for the principal agricultural products by dividing the total quantity produced into the total gross value of production for each crop. They therefore represent weighted average 'prices' of the product in all markets (including the farm itself where quantities are retained for farm use) and indicate trends rather than prices actually paid to farmers.

Average Unit Gross Values: Principal Crops
(\$)

Crop	Unit of quantity	1972-73	1973-74	1974-75	1975-76	1976-77
Cereals for grain—						
Barley	tonne	52.53	77.00	91.78	98.83	111.07
Oats	tonne	71.52	87.11	77.53	78.80	107.61
Wheat	tonne	52.20	103.97	103.51	97.31	82.00
Legumes mainly for grain—						
Beans, navy and horse	tonne	121.02	157.76	229.30	250.84	265.06
Peas, field	tonne	104.11	184.46	165.12	155.33	180.15
Crops for hay	tonne	24.38	30.11	63.95	29.17	49.81
Vegetables for sale for human consumption—						
Beans, French and runner	tonne	111.03	97.03	118.64	144.39	162.60
Peas, green (ex-shell)	tonne	106.14	115.72	163.27	183.22	212.16
Potatoes	tonne	57.23	86.92	59.43	76.76	83.33
Turnips	tonne	105.22	93.98	115.24	193.66	148.27
Orchard tree fruit—						
Apples	tonne	120.87	120.46	148.65	172.99	163.50
Apricots	tonne	223.13	177.49	342.89	223.87	217.08
Pears	tonne	173.95	117.11	180.70	171.42	195.26
Berry and small fruit—						
Blackberries	kg	0.24	0.27	0.41	0.40	0.50
Currants	kg	0.35	0.39	0.47	0.50	0.55
Gooseberries	kg	0.22	0.24	0.31	0.32	0.44
Loganberries	kg	0.34	0.38	0.46	0.47	0.57
Raspberries	kg	0.35	0.41	0.53	0.50	0.58
Strawberries	kg	0.95	1.02	1.73	1.60	1.55
Hops	kg	1.96	1.65	0.86	1.40	1.69
Pasture (a) for hay	tonne	20.43	19.72	27.85	17.47	25.31
Pasture (a) for seed—						
Clover	kg	1.23	1.02	1.34	1.14	1.30
Other	kg	0.45	0.49	0.45	0.21	0.36

(a) Includes lucerne.

Livestock Slaughterings and other Disposals

For the main categories of livestock sold for slaughter, the first of the next two tables shows the gross value of production (including an adjustment for net exports), and the second table the average prices paid:

Livestock Slaughterings and Other Disposals (a): Gross Value
(\$'000)

Particulars	1972-73	1973-74	1974-75	1975-76	1976-77
Cattle and calves	28 799	41 314	17 753	20 740	27 686
Sheep and lambs	8 622	10 209	6 359	5 710	8 617
Pigs	4 821	4 992	5 625	5 481	6 028
Poultry	1 320	1 505	1 970	2 121	2 824
Total	43 562	58 019	31 707	34 052	45 156

(a) Includes an adjustment for net export of live animals.

Average Livestock Prices (a)
(\$)

Livestock	1972-73 r	1973-74	1974-75 r	1975-76	1976-77
Cattle (other than calves)	108.64	r 145.21	71.13	71.24	90.10
Sheep	5.84	r 9.58	3.54	r 2.75	5.76
Lambs	8.33	14.20	7.92	8.10	11.49
Pigs	31.36	r 43.13	54.86	58.27	60.11

(a) Estimated average prices, on the hoof, of livestock sold for slaughter.

Livestock Products

A wide range of goods are manufactured in Tasmanian factories from livestock products, but the number of such livestock products is very limited. The two major ones are wool and milk and in terms of gross value accounted for 46 and 44 per cent of the total, respectively, in 1976-77.

Details of gross values for livestock products for the years 1972-73 to 1976-77 are shown below:

Livestock products: Gross Value
(\$'000)

Particulars	1972-73	1973-74	1974-75	1975-76	1976-77
Wool—					
Shorn (including crutchings)	35 291	30 226	22 930	27 139	33 000
Fellmongered and exported on skins ..	2 191	1 747	960	1 281	1 993
Total	37 481	31 973	23 890	28 420	34 993
Dairy products, whole milk used for—					
Processing	17 297	17 369	22 407	21 085	24 462
Human consumption and other purposes ..	5 252	5 775	6 951	7 669	8 601
Total dairy products	22 549	23 144	29 358	28 754	33 063
Eggs	4 502	4 548	4 903	6 239	7 249
Honey	213	322	423	446	410
Beeswax	7	8	14	21	14
Total livestock products	64 750	59 995	58 588	63 880	75 729

All Primary Industries (Excluding Mining)

In the table that follows gross and local values of production for all primary industries (excluding mining) are shown for the last five years:

Tasmanian Primary Production: Gross and Local Value
(\$'000)

Particulars	1972-73	1973-74	1974-75	1975-76	1976-77
CROPS (a)					
Gross value of production	40 041	46 649	49 409	r 44 101	57 734
Less Marketing costs	11 780	9 680	9 739	r 7 864	7 104
Local value of production	28 261	36 969	39 670	r 36 237	50 630
LIVESTOCK SLAUGHTERINGS AND OTHER DISPOSALS					
Gross value of production	43 562	58 019	31 707	34 052	45 156
Less Marketing costs	3 199	4 019	2 624	3 010	3 726
Local value of production	40 363	54 000	29 083	31 042	41 430

Tasmanian Primary Production: Gross and Local Value—continued
(\\$'000)

Particulars	1972-73	1973-74	1974-75	1975-76	1976-77
LIVESTOCK PRODUCTS					
Gross value of production	64 750	59 995	58 588	63 880	75 729
Less Marketing costs	3 098	2 733	4 461	2 847	3 891
Local value of production	61 652	57 262	54 127	61 033	71 838
TOTAL AGRICULTURE (a)					
Gross value of production	148 353	164 663	139 704	r 142 033	178 619
Less Marketing costs	18 077	16 432	16 825	r 13 721	14 721
Local value of production	130 276	148 231	122 879	r 128 312	163 898
FORESTRY					
Gross value of production	30 922	43 273	50 022	46 991	55 429
Less Marketing costs	5 562	7 393	7 160	6 317	7 528
Local value of production	25 360	35 880	42 862	40 674	47 901
FISHING					
Gross value of production	5 739	7 014	6 928	8 511	11 713
Less Marketing costs	—	—	—	—	—
Local value of production	5 739	7 014	6 928	8 511	11 713
HUNTING					
Gross value of production	415	470	428	531	445
Less Marketing costs	28	31	29	31	40
Local value of production	387	439	399	500	405
TOTAL PRIMARY (EXCLUDING MINING) (a)					
Gross value of production	185 429	215 420	197 082	r 198 066	246 206
Less Marketing costs	23 667	23 856	24 014	r 20 069	22 289
Local value of production	161 762	191 564	173 068	r 177 997	223 917

(a) Excludes crops and pastures harvested for green feed and silage.

Further References

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Australian Fisheries (published monthly by the Federal Department of Primary Industry)

Chapter 9

MANUFACTURING AND ELECTRICITY

INDUSTRIAL DEVELOPMENT

Primary-Secondary Relativity

Prior to World War II, there were few large manufacturing establishments in Tasmania. The economy of the State was dominated by primary industries which, in 1938-39, accounted for 60 per cent of the net value of production of all recorded industries.

By today's criteria, pre-war operations of manufacturing establishments were on a small scale but some enterprises have since emerged as national leaders in particular fields. Despite the limitations of geographical isolation and a relatively small domestic market the State went through a period of important industrial development following World War II; the cessation of hostilities released a world-wide demand for goods and services and a number of new Tasmanian factories were established to take advantage of the situation.

Post-war expansion of factory activity has made the State an important supplier of manufactured goods and processed materials. Major factories which have been established since World War II include producers of chemicals, woodpulp, textiles, processed foods, industrial equipment, refined aluminium, manganese alloys, iron ore pellets and woodchips.

Since the early 1950s, the manufacturing sector has been predominant in terms of its economic significance to the State. (See the section 'Integrated Economic Censuses' in Chapter 18 for an inter-sector comparison of various industry sectors.)

Tasmania as a Site for Industry

Tasmania has certain advantages which have attracted new industrial enterprises. The principal factors are:

Hydro-Electric Power: The availability of cheap, bulk electricity for power intensive industries (e.g. in metal smelting and refining, heavy chemicals, paper and paper pulp making) has had a significant influence on Tasmania's industrial development and is discussed in greater detail below.

Water Resources: In some parts of the world, water resources are inadequate; shortage of water and the high cost of conservation, re-use and 'purification' have become major problems in the expansion of industry. This is not the situation in Tasmania where water is abundant. The terrain favours the economical construction of high-level storages, while run-of-the-river pumping schemes are feasible at many sites.

Industrial Land, Harbours and Shipping: The decentralized nature of the State and a policy of making provision for industry in each main region has enabled industrial land to be both readily available and cheap. Its proximity to deep-sea ports is another factor influencing the expansion of industry in and around the four main centres of population (Hobart, Launceston, Burnie and Devonport). The associated ports are fully equipped to handle unutilised, containerised, roll-on/roll-off and orthodox cargoes, as well as cargo in bulk form. They are served by overseas and interstate ships using modern cargo handling techniques.

Stability of the Workforce: Tasmania has established a record over many years for having fewer industrial disputes and, almost always, fewer days lost per employee each year due to strikes, than any other Australian state. The Tasmanian workforce also exhibits a more stable pattern in terms of duration of employment.

The policy of the State Government is to encourage the establishment and growth of industries in Tasmania and to promote trade as provided by the *Industrial Development Act*

1954. This Act is administered by the Director-General of the Department of Planning and Development under the Minister for Planning and Development.

The Department of Planning and Development gives advice, information and assistance on a wide range of important industrial matters. It is empowered to provide financial assistance, including loan guarantees, to help the expansion of existing industries and the establishment of new enterprises. As a service to industry, the Department has officers specialising in the areas of finance, trade, development, research and the publication of information, and they are supported by the resources and expertise of Federal and other State Government departments and instrumentalities. A trade officer operates from the offices of the Agent-General for Tasmania in London. (A special article on the role and activities of the Department was included in Chapter 18 of the 1978 *Year Book*.)

Electric Power and Industrialisation

The key to the large scale industrial development of Tasmania was its abundant water at high level in the Central Plateau and the State's industrial revolution may be thought of as beginning in 1916 when the Waddamana turbines below the Great Lake began operating; from the initial 7 500 kW then developed, the hydro-electric system has expanded to a capacity of 1.5m kW (excluding gas turbines at Bell Bay with a generator capacity of 240 000 kW). The availability of cheap electric power resulted in the establishment of new types of industry, some on a very large scale; examples are: electrolytic zinc production, 1916; carbide manufacture, 1918; fine paper production, 1938; aluminium production, 1955; ferro-manganese production, 1962. The introduction of pulp and paper manufacture is a special case to the extent that changes in technology made possible the use of native hardwoods for the first time; the production of suitable pulp from eucalypts was pioneered in Tasmania before plants were established in other Australian states.

Major Industries

Source of Data: In normal circumstances, the Bureau of Statistics does not publish information relating to any single enterprise or establishment, and treats any such information it collects as strictly confidential. It does, however, publish statistical aggregates where they do not directly or indirectly reveal the operations of any single informant. A description of industrial development without mentioning individual organisations is not very illuminating; therefore, the State Department of Planning and Development has prepared the following section and accepts responsibility for the information given.

Brief descriptions of some of the major factories operating in Tasmania are given below (see the section 'Mining', in Chapter 8 for descriptions of some of the major mining companies operating in the State):

Associated Pulp and Paper Mills Ltd (Burnie, Wesley Vale, Long Reach): This group of companies is a major Australian integrated forest products complex and Australia's principal producer of fine printing and writing papers, magazine papers and coated papers. In Tasmania the Company operates major manufacturing complexes at three centres: (i) *Burnie*—where it commenced paper production in 1938; present annual capacity of the Burnie plant is 121 000 tonnes. (ii) *Wesley Vale*—In 1970 the first stage of an integrated pulp and paper complex was completed when the first paper machine commenced production. The machine has an annual capacity of 35 500 to 41 000 tonnes of paper. Production at Wesley Vale is mainly of magazine papers. A particle board factory, run by the subsidiary Burnie Timber Pty Ltd, also operates at Wesley Vale; annual production exceeds 2.5m square metres. (iii) *Long Reach*—A.P.P.M. completed its woodchip plant and made its first export shipment in 1972. The Company has a long-term contract for the export of woodchips to Japan.

Australian Newsprint Mills Ltd (Boyer): Since beginning operations in 1941, this Company has, through a series of expansion programs, increased its annual production of newsprint from 27 400 tonnes to its present capacity of 208 000 tonnes. The construction of a \$10.5 million thermo-mechanical pulping plant, to produce pulp for the production of newsprint from *Pinus radiata* chips, began early in 1977 and was completed in September 1978. In conjunction with the construction of the new pulping plant, the Company is installing two modern grinders at a cost of approximately \$12 million to increase capacity and replace obsolete machines.

Cadbury Schweppes Australia Ltd (Claremont): In 1921 an association of three British confectioners established their Australian plant at Claremont, near Hobart. Today, the plant is the largest cocoa and confectionery factory in Australia. In conjunction with H. P. Bulmer and Co., a plant was installed at Claremont in 1974 for apple juice extraction and concentration for export. During 1976 chocolate production capacity increased when a new chocolate refining layout was commissioned. In 1978 shipment of dairy milk chocolate to the Company's Ringwood factory in Victoria commenced and total production was increased as a result.

Cascade Group of Companies (Statewide): Operates the Cascade Brewery in Hobart (established in 1824), the Boag's Esk Brewery in Launceston and cordial, fruit juice and apple cider making companies.

Coats Patons (Aust.) Ltd (Launceston): This Company first produced yarns in 1923 and steady expansion has followed. Their factory at Launceston produces knitting yarns, both wool and synthetic and annual production is approximately 1.5 million kilograms.

Comalco Aluminium (Bell Bay) Ltd (George Town): An aluminium smelter and alumina refinery commenced production in 1955 at Bell Bay under Federal Government ownership. In 1961 the plant and facilities were acquired by the present Company which, by successive expansion programs, has increased production of aluminium nine-fold. Refinery operations ceased in 1974 and alumina for smelting is now imported from Queensland. The smelter is now the largest in Australia. A \$20 million expansion program was completed in 1977 which lifted production capacity from 95 600 tonnes to 114 500 tonnes per annum.

Edgell, Division of Petersville Ltd (Devonport and Ulverstone): This Company is Tasmania's leading processor of frozen and canned vegetables. The annual volume of raw materials required by the Ulverstone and Devonport factories is approximately 90 000 tonnes, the main crops processed being potatoes, green peas and green beans. (See also the special article on this Company towards the end of this Chapter.)

Electrolytic Zinc Company of A/asia Ltd (Risdon and Rosebery): Established in 1916, the factory at Risdon is the largest producer of zinc in Australia and the second largest electrolytic zinc plant in the world. It exports an extensive range of zinc and zinc alloys to over 30 countries. The Risdon plant has the capacity to produce approximately 600 tonnes of zinc per day. Apart from zinc and zinc alloys the Company also produces cadmium, sulphuric acid, superphosphate, sulphate of ammonia and aluminium sulphate. Production capacity at the Company's mining complex at Rosebery is 610 000 tonnes of silver-lead-zinc ore per annum. The zinc plant supplies a large proportion of Australia's total requirements.

General Jones Pty Ltd (Smithton): On 1 April 1976, the frozen food division of Henry Jones (IXL) and Cottee's General Foods combined and formed this independent Company. The amalgamation involved a \$13.7 million expansion program to double the output of the existing Smithton factory. Consequently there has been an increase in the area of vegetables grown for processing by farmers in the vicinity of Smithton.

Goliath Portland Cement Co. Ltd (Railton): Formed in 1928 to take over a small plant, the Company began production in 1930 with an annual output of 66 000 tonnes of cement a year. Production capacity has since increased rapidly. Plant expansion in 1970 lifted annual production capacity to over 500 000 tonnes and production capacity in 1977 was raised to 650 000 tonnes per annum. The Company also produces approximately 1 000 000 square metres of asbestos-cement sheeting each year.

Humes Ltd (Statewide): Produces pre-cast concrete pipes and products as well as clay pipes and fittings; rigid P.V.C. (poly vinyl chloride) pipe is produced in Launceston. A subsidiary company, Steel Mains Pty Ltd, manufactures water, steam and oil lines up to six metres in diameter. This Company also manufactures pressure vessels, spheres, bulk storage tanks, etc. A field crew operates throughout the State and installs all types of structural steel, pipelines and mechanical items.

Johns Phoenix (Launceston, Derwent Park): This Company is one of the largest general engineering companies in Tasmania and employs approximately 200 persons. The products and services include fabricated steelwork, general engineering, general machining, and the erection of plant and equipment. Workshops previously owned by the Company at Bell Bay and Wynyard were recently sold to Hayward Constructions Ltd.

Repco Bearing Company (Launceston): In 1949 this Company was established to manufacture engine bearings for the Australian automotive spare parts trade. The factory has since expanded and diversified its range of products and is now the largest automotive bearing manufacturing company in Australia. The Company also undertakes general contract machining and precision work, precision tool making, the manufacture of copper, tin and alloy powders, and the manufacture of sintered products using powder metallurgy techniques.

Stanley Tools (Moonah): A Division of The Stanley Works Pty Ltd: The Company is Tasmania's only manufacturer of hand tools. During the past 12 months, extensive capital investment in productive equipment has increased plant capacity for existing products and allowed the introduction of new products for manufacture. During 1979 a further three new products are planned for local manufacture and, in addition, screwdriver manufacture will be relocated from Stanley's Hardware Division (Melbourne) to the Moonah plant. Employment during the 12-month period is expected to increase from the 1978 level of 210 to 280.

Tasmanian Electro-Metallurgical Co. Pty Ltd (Bell Bay): The Broken Hill Co. Pty Ltd established a plant in 1962 to produce high carbon ferro-manganese for the Australian steel industry, with an initial annual output in excess of 26 000 tonnes. Silico-manganese alloys are now also being produced and a recent \$42 million expansion program increased capacity from 77 000 tonnes to about 150 000 tonnes a year. This expansion also enabled production of ferro-silicon in Tasmania for the first time.

Tioxide Australia Pty Ltd (Burnie): Production of titanium dioxide pigments began in 1948 with a plant capacity of more than 1 500 tonnes per annum. The annual production capacity was increased from 25 400 tonnes to 32 000 tonnes during 1976. More than half Tioxide's production is used in a wide variety of paints ranging from industrial, automotive and marine coatings to a complete range of domestic finishes. Titanium products are also used in an increasingly diverse range of products including printing inks, papers, plastics, floor coverings, man-made fibres, rubber products, vitreous enamels, leather finishes, vinyls, coverings and cosmetics. The Company is the predominant supplier of titanium pigments to the Australian market and a significant supplier to South-East Asian countries. A staff of 425 was employed in mid-1978. A digester gas scrubbing plant was recently installed at a cost of \$1.4 million and has greatly reduced waste emission to the atmosphere. Work to reduce off-shore water discolouration is well advanced.

Tootal Australia Limited (Devonport): The first operations in 1952 used piece-goods imported from the U.K. to make textiles. The factory was expanded in 1953 to include the weaving, dyeing and finishing of locally produced fabrics. The Company now manufactures a wide range of woven and knitted fabrics from man-made fibres.

United Milk Products (Smithton): Is one of the State's principal producers of dairy produce. Production recently reached approximately the levels shown: butter (salted and unsalted), 2 000 tonnes; cheese (cheddar), 7 500 tonnes; milk powders (skim, full cream and buttermilk), 3 000 tonnes; and casein (acid), 200 tonnes per annum. The Company also operates an abattoir exporting 90 per cent of its output overseas.

U.T.A. Hobart Mill (Derwent Park): This Mill is part of the Domestic Division of the Clothing, Footwear and Textile Group of Dunlop Australia Ltd. The Hobart Manufacturing Division commenced operations as Silk & Textile Printers Pty Ltd in 1948. Production now involves the printing of synthetic furnishing fabrics, polyester/cotton sheeting, shower curtain fabrics, and mattress ticking. The Mill also manufactures and distributes finished domestic articles in the form of printed and plain dyed sheets packed singly and in sets, shower curtains, continental quilt covers and continuous curtaining.

MANUFACTURING STATISTICS

Principal Articles Manufactured

The articles listed below do not include the following important Tasmanian products: aluminium, automotive engine bearings, carbide, cement, confectionery, ferro-manganese alloys, hand tools, hardboard, iron ore pellets, particle board; printing, writing and wrapping papers; starch; titanium di-oxide; canned, dehydrated and quick frozen vegetables; woodpulp, woollen manufactures, and other textile products. Where there are only one or two producers or where one producer dominates, it is not possible to publish details for

articles that are important and would otherwise be included. Some articles, although principal manufactures, such as cakes, pastry and pies, wooden furniture and joinery (excluding doors) are not included, as value details only are collected for such items.

The following table lists the principal articles manufactured in Tasmania (with the exceptions detailed above) for recent years:

Principal Articles Manufactured: Quantities

Article	Unit	1972-73	1973-74	1974-75	1975-76	1976-77
Acid, sulphuric	tonnes	652 513	570 156	517 052	466 817	506 338
Aerated waters	'000 litres	15 236	15 751	14 845	16 219	18 786
Apples, preserved (solid pack)	tonnes	5 955	7 669	5 824	6 255	4 203
Bacon and ham	tonnes	1 902	1 931	2 169	2 356	2 434
Bricks, blocks, etc.	'000	50 422	58 505	56 378	66 682	65 893
Butter (a)	tonnes	12 947	12 398	12 196	10 762	9 707
Cheese	tonnes	7 218	8 475	12 387	13 332	13 156
Concrete, ready mixed	m ³	199 791	236 407	247 343	277 082	284 555
Electricity, total generated	m kWh	5 902	6 010	6 095	6 008	6 842
Fertilisers—						
Sulphate of ammonia	tonnes	48 654	33 191	54 701	23 040	12 291
Superphosphate	tonnes	177 192	180 458	103 253	57 896	101 281
Flour	tonnes	31 698	34 643	34 938	30 691	32 427
Paper, newsprint	tonnes	199 053	200 852	196 240	206 228	206 590
Timber—						
Sawn, peeled or sliced (b)—						
Hardwood	'000 m ³	403.8	398.2	388.3	349.7	330.9
Softwood	'000 m ³	12.4	16.1	21.8	23.8	37.3
Dressed—						
Floorboards	'000 m ³	77.3	76.7	58.6	49.7	45.4
Weatherboards	'000 m ³	5.2	4.8	2.6	2.2	0.4
Other	'000 m ³	58.4	62.5	59.7	60.4	90.0
Woodchips, etc. (green weight) (c)	'000 tonnes	2 191	3 043	2 947	2 436	2 967
Zinc, refined	tonnes	193 782	182 749	152 749	137 637	170 685

(a) Includes butter equivalent of butter oil.

(b) Includes timber to be further processed.

(c) Defined in forestry section of Chapter 8.

Manufacturing Censuses

Annual censuses of factories were conducted by the Bureau from almost the start of the present century; the last 'old style' factory census covered the year 1967-68. For 1968-69 simultaneous integrated economic censuses were undertaken in respect of manufacturing and four other sectors (mining; wholesale trade; retail trade; and electricity and gas production and distribution).

The 1968-69 integrated economic censuses were fully described in Appendix A of the 1972 *Year Book* in which there also appears an explanation of the factors which made necessary the termination of 'old style' factory censuses and the start of a new series, based on new reporting units and data concepts. In the following section, the results of the manufacturing census for 1975-76 are given.

Definitions and data concepts applying to the integrated economic censuses will be found in the section 'Integrated Economic Censuses' in Chapter 18 of this edition. Also, results from manufacturing censuses are compared with those from integrated economic censuses covering other industry sectors in that section.

Census Results

Manufacturing Establishments Classified According to Industry

The table that follows contains a summary of the principal manufacturing statistics by industry sub-division. Single establishment enterprises employing less than four employees at 30 June 1976 are excluded from this table:

Manufacturing Establishments: Operations by Industry Sub-division, 1975-76

ASIC code (a)	Industry sub-division Description	Establishments operating at 30 June	Employment (including working proprietors)—average over whole year			Wages and salaries	Turn-over
			Males	Females	Persons		
		no.	no.	no.	no.	\$'000	\$'000
21,22	Food, beverages and tobacco	118	4 195	1 764	5 959	42 058	256 201
23	Textiles	16	1 277	1 277	2 554	17 244	57 450
24	Clothing and footwear	12	83	158	241	1 251	3 220
25	Wood, wood products and furniture	219	4 233	341	4 574	30 263	142 595
26	Paper, paper products and printing	46	4 520	691	5 211	43 825	169 344
27	Chemical, petroleum and coal products	20	1 228	106	1 334	12 467	54 811
28	Non-metallic mineral products	58	1 001	84	1 085	8 978	40 913
29	Basic metal products	11	3 070	104	3 174	30 023	222 956
31	Fabricated metal products	80	1 229	188	1 417	9 301	36 645
32	Transport equipment	27	977	122	1 099	8 161	22 409
33	Other industrial machinery and equipment and household appliances	40	763	50	813	5 903	15 409
34	Miscellaneous manufacturing	20	251	41	292	1 852	7 627
	Total manufacturing	667	22 827	4 926	27 753	211 327	1 029 579

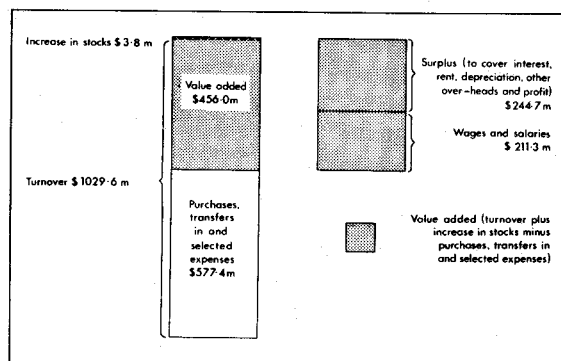
ASIC code (a)	Industry sub-division Description	Stocks		Purchases, transfers in and selected expenses	Value added	Fixed capital expenditure (b)
		Opening	Closing			
21,22	Food, beverages and tobacco	33 236	34 003	157 642	99 326	8 186
23	Textiles	13 632	14 451	30 061	28 209	549
24	Clothing and footwear	150	250	1 790	1 530	38
25	Wood, wood products and furniture	26 838	28 564	72 075	72 247	8 102
26	Paper, paper products and printing	30 475	24 344	84 922	78 290	3 920
27	Chemical, petroleum and coal products	10 953	11 830	31 090	24 598	3 122
28	Non-metallic mineral products	3 675	4 691	21 296	20 631	2 761
29	Basic metal products	66 792	70 429	138 866	87 727	14 739
31	Fabricated metal products	6 795	6 402	20 001	16 251	851
32	Transport equipment	4 992	6 004	8 339	15 082	415
33	Other industrial machinery and equipment and household appliances	2 315	2 557	7 199	8 455	603
34	Miscellaneous manufacturing	1 057	1 228	4 113	3 684	650
	Total manufacturing	200 908	204 754	577 393	456 029	43 936

(a) Australian Standard Industrial Classification code.

(b) Outlay on fixed tangible assets less disposals.

Tasmania-Australia Comparison

In 1975-76 the Tasmanian share of Australian employment in manufacturing was 2.31 per cent; and of Australian 'value added' in manufacturing 2.69 per cent. (Tasmania's mean population as a proportion of Australia's for 1975-76 was 2.93 per cent.)



Manufacturing Establishments: Tasmania, 1975-76

Manufacturing by Statistical Division

The next table shows, as a time series, the chief measures of manufacturing operations by statistical divisions:

Manufacturing Establishments: Main Items by Statistical Division (a)

Main items	Unit	Year ended June	Statistical divisions			Tasmania
			Hobart and Southern	Northern	Mersey-Lyell	
Number of establishments	no.	1973	391	324	197	912
		1974	406	324	205	935
		1975	255	223	150	628
		1976	257	247	163	667
Employment (b)—Males	no.	1973	10 322	7 590	6 756	24 668
		1974	10 321	7 905	6 977	25 203
		1975	9 712	7 224	6 763	23 699
		1976	9 103	7 022	6 702	22 827
Females	no.	1973	2 127	2 501	1 388	6 016
		1974	2 302	2 442	1 580	6 324
		1975	2 181	1 609	1 363	5 153
		1976	2 051	1 554	1 321	4 926
Persons	no.	1973	12 449	10 091	8 144	30 684
		1974	12 623	10 347	8 557	31 527
		1975	11 893	8 833	8 126	28 852
		1976	11 154	8 576	8 023	27 753
Wages and salaries	\$'000	1973	52 075	40 751	37 877	130 703
		1974	61 484	50 861	49 039	161 386
		1975	76 828	59 142	58 916	194 883
		1976	82 690	64 363	64 274	211 327
Value added	\$'000	1973	114 757	82 693	85 969	283 420
		1974	139 940	100 709	99 601	340 250
		1975	151 862	128 525	121 871	402 255
		1976	166 525	147 477	142 027	456 029
Fixed capital expenditure	\$'000	1973	6 617	12 259	6 016	24 893
		1974	9 911	6 505	8 383	24 798
		1975	15 091	28 998	9 058	53 146
		1976	11 669	21 877	10 390	43 936

(a) From 1974-75 figures exclude details for single establishment enterprises employing less than four persons at 30 June.

(b) Includes working proprietors; figures are average over whole year.

Tasmania in Comparison with Other Australian States

A comparison of Tasmanian manufacturing activity with that of the other Australian states and territories is shown in the following table. Applying the appropriate population relativity factors to the figures, it will be seen that, on the basis of the resulting values, Tasmania is relatively more industrialised than Queensland, Western Australia, Northern Territory and the Australian Capital Territory and approaches the level of South Australia.

Manufacturing and Electricity

Tasmania-Australia Comparison of Manufacturing Activity, 1975-76

State or territory	Popula- tion relativity (a)	Estab- lish- ments	Wages and salaries	Turn- over (b)	Stocks at 30 June		Pur- chases, etc. (c)	Value added
					1975	1976		
ACTUAL VALUES								
N.S.W.	12.1	no. 10 329	\$m 3 670	\$m 14 555	\$m 2 532	\$m 2 680	\$m 8 331	\$m 6 371
Vic.	9.2	8 873	3 287	13 220	2 364	2 472	7 564	5 765
Qld.	5.2	3 119	873	4 561	504	591	2 844	1 804
S.A.	3.1	2 287	872	3 461	638	676	2 012	1 486
W.A.	2.9	2 054	509	2 433	298	354	1 544	944
Tasmania	1.0	667	211	1 030	201	205	577	456
N.T.	0.2	69	21	127	34	36	83	46
A.C.T.	0.5	106	29	96	9	10	44	53
Total Australia ..	34.1	27 504	9 472	39 483	6 580	7 024	22 999	16 925

VALUES RELATIVE TO POPULATION (d)								
N.S.W. ....	..	854	303	1 203	209	221	689	527
Vic. ....	..	964	357	1 437	257	269	822	627
Qld. ....	..	600	168	877	97	114	547	347
S.A. ....	..	738	281	1 116	206	218	649	479
W.A. ....	..	708	176	839	103	122	532	326
Tasmania .....	..	667	211	1 030	201	205	577	456
N.T. ....	..	345	105	635	170	180	415	230
A.C.T. ....	..	212	58	192	18	20	88	106
Total Australia .....	..	807	278	1 158	193	206	880	496

(a) Tasmania's total mean population for 1975-76 is expressed as 1.0; other state populations in proportion to 1.0.

(b) Sales, transfers out and other operating revenue.

(c) Purchases, transfers in and selected expenses.

(d) Figures are calculated by dividing the actual figures by the appropriate population relativity factor. They do not represent direct per head of population details but merely a comparison of the degree of manufacturing activity in each state relative to population.

CENSUSES OF ELECTRICITY AND GAS ESTABLISHMENTS

Until 1968-69 factory production statistics contained details for Class XVI (Heat, Light and Power); in the 'old style' annual factory censuses, of which the last covered 1967-68, this class was confined to the *production* of electricity and gas and such operations were treated as a particular type of factory activity. For 1968-69 simultaneous economic censuses were undertaken in respect of electricity and gas production and distribution and four other sectors (manufacturing; retail trade; wholesale trade; and mining). Details relating to the 1968-69 census of electricity and gas establishments are included in the 1973 *Year Book*; results from censuses conducted for 1969-70 and 1971-72 may be found in the 1974 and 1977 editions of the *Year Book*, respectively. Details from the 1974-75 census for Tasmania cannot be released because of confidentiality restrictions.

THE TASMANIAN ELECTRICITY GENERATING SYSTEM

Introduction

Until 1971 Tasmania was unique among Australian states in that its electric power system was based predominantly on hydro-electric installations, but in 1971 a thermal oil-fired station commenced operations at Bell Bay opening a new phase in the development of the generating system. Other Australian states rely principally on thermal plants while hydro-electric power, if available, is used only to supplement the basic supply. The Snowy Mountains Hydro-Electric Scheme, which feeds power to Victorian and N.S.W. grids, is not designed to cope with the base load demand in these states, and its essential function is to provide the extra

power necessary to meet peak loads, and also to supply water for irrigation purposes. The Tasmanian system, despite its lower installed capacity, produces more power than the Snowy Scheme. The total installed generator capacity of the Tasmanian electricity generating system at the end of 1978 was almost 1.8 million kW. Of this, 87 per cent was contributed by an integrated hydro-electric network. A 240 000 kW oil-fired station at Bell Bay is available for use as required.

Early Development and Current Generating Capacity

Hydro-electric power for public use was first introduced in 1895 with construction of the 450 kW *Duck Reach* station on the South Esk River near Launceston. This was a purely municipal supply and work on Tasmania's state-wide system did not begin until 1911 with the exploitation of the Great Lake catchment waters and diversion of the Ouse and Shannon Rivers.

The concentration on water as a source of power in Tasmania has resulted in the need to follow a policy of water conservation to regulate the high winter and spring run-off. Emphasis in the power developments has been on the creation of large storages and successive use of the impounded waters (e.g. water from Lake St Clair may pass through eight power stations before reaching the tidal waters of the Derwent River at New Norfolk).

By May 1916 *Waddamana 'A'* station (7 000 kW), the first stage of the Great Lake scheme, was commissioned. *Shannon* station was opened in 1934 and in 1944 the third stage of the scheme, *Waddamana 'B'* station (48 000 kW) commenced generation. When *Poatina* station was commissioned in 1965, the *Waddamana 'A'* and *Shannon* stations were closed down, *Waddamana 'B'* being retained only for emergency and peak-load generation.

The following table outlines the current status of the Tasmanian generating system:

Tasmanian Power Generating System

Station	Year of commission	Head (in metres)	Generator capacity (kW)
COMPLETED STATIONS			
Waddamana 'B' (a)	1949	344	48 000
Tarraleah	1951	299	90 000
Butlers Gorge	1951	56	12 200
King Island	1951	(b)	1 400
Trevallyn	1955	126	80 000
Tungatinah	1956	306	125 000
Lake Echo	1956	173	32 400
Wayatinah	1957	62	38 250
Liapootah	1960	110	83 700
Catagunya	1962	43	48 000
Poatina	1965	829	(c) 300 000
Tods Corner	1966	41	1 600
Meadowbank	1967	29	40 000
Cluny	1967	16	17 000
Repulse	1968	27	28 000
Rowallan	1968	49	10 450
Flinders Island	1968	(b)	300
Lemonthyme	1969	159	51 000
Devils Gate	1969	69	60 000
Wilmot	1971	251	30 600
Bell Bay (Stage 1)	1971	(d)	120 000
Cethana	1971	99	85 000
Paloona	1972	31	28 000
Fisher	1973	651	43 200
Bell Bay (Stage 2)	1974	(d)	120 000
Gordon (Stage 1) (e)	1978	186	288 000
Total	..	..	1 782 100

Tasmanian Power Generating System—continued

Station	Year of commission	Head (in metres)	Generator capacity (kW)
STATIONS UNDER CONSTRUCTION			
Gordon (Stage 1, additional capacity)	(e)	186	(e) 432 000
Mackintosh	1981	68	72 000
Rosebery	1983	63	76 500
Pieman	1985	93	270 000
Total .....	..	..	850 500

(a) Reserve plant only.

(b) Diesel generators.

(c) Additional generator installed in the existing station in early 1977 increasing generator capacity by 50 000 kW.

(d) Thermal oil-fired station.

(e) Stage 1 of the Gordon power development involves the progressive installation of five generators, each with a generating capacity of 144 000 kW. Initially two generators were installed, the first being commissioned in January 1978 and the second later in that year. The remaining generators will be installed as peak loads demand greater installed capacity, giving a final total capacity of 720 000 kW.

Completed Schemes

Tarraleah-Butlers Gorge

The Tarraleah development with headwaters regulated by raising Lake St Clair (1937) and the man-made Lake King William (1949) was commenced in 1934 and first generated power in 1938. The capacity of *Tarraleah* was progressively expanded to 90 000 kW in 1951 when the station was completed with the installation of a sixth generator; *Butlers Gorge* station (12 200 kW) commenced generation on the completion of the Clark Dam in 1951.

Tungatinah-Lake Echo

Built to regulate run-off from the extensive area between Great Lake and Lake St Clair, the 32 400 kW *Lake Echo* and 125 000 kW *Tungatinah* stations were commissioned in 1956.

Great Lake-South Esk

The *Poatina* station (300 000 kW), the largest station in the Tasmanian hydro-electric system, had been developed to a capacity of 250 000 kW by 1965. The station utilises the waters of Great Lake which have been diverted into the South Esk River system. A sixth generator of 50 000 kW capacity was commissioned in 1977 bringing the total installed capacity of the station to 300 000 kW. The *Poatina* tailrace discharges into the South Esk River which feeds the run-of-the-river *Trevallyn* station (80 000 kW) located near Launceston.

Derwent River Power Developments

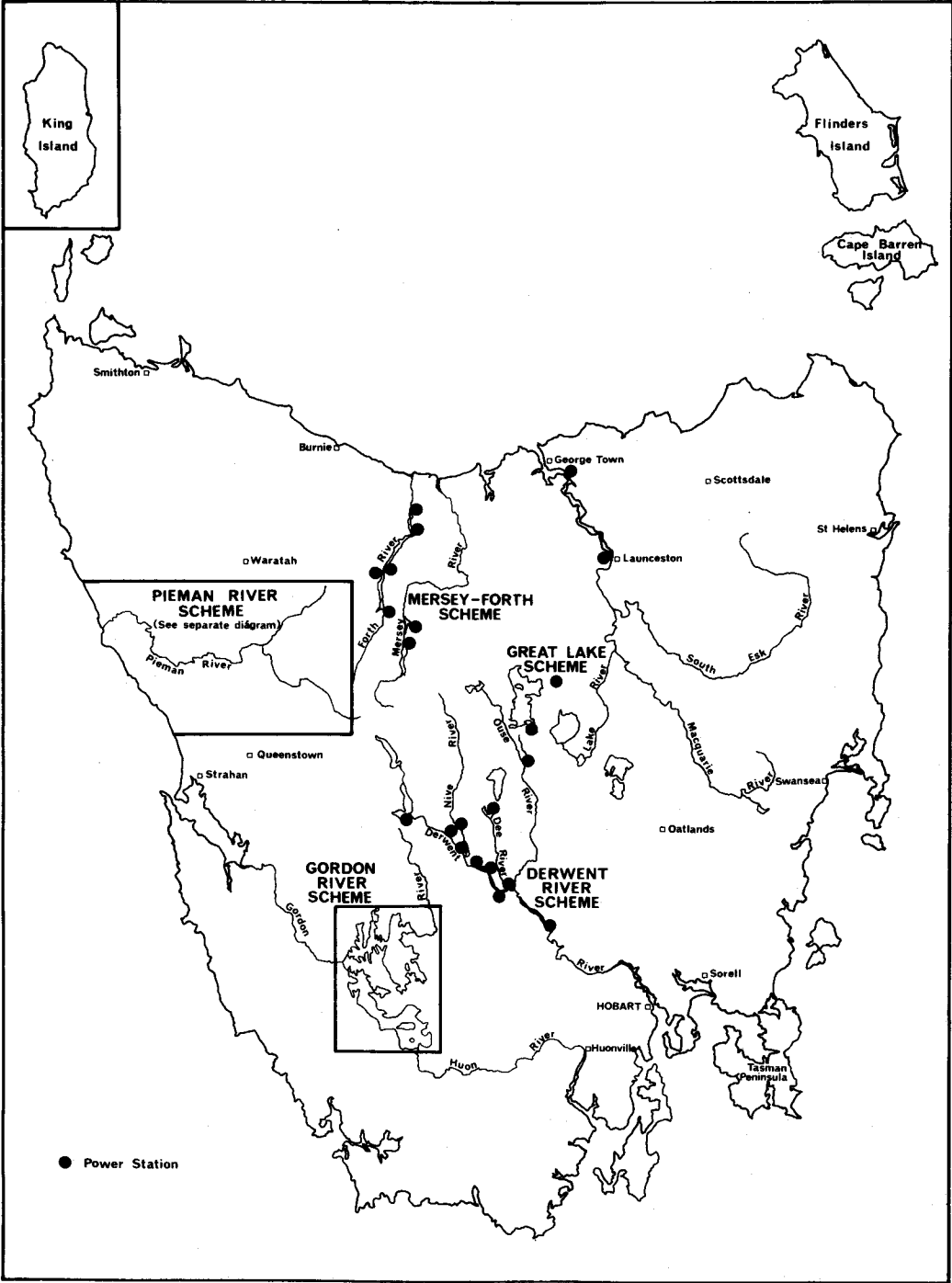
Two systems in the middle and lower Derwent River utilise the waters of the Derwent and its major tributaries, the Nive and Florentine. In the middle Derwent system the *Wayatinah* station (38 250 kW) was completed in 1957, followed by the 83 700 kW *Liapootah* station (1960) and the 48 000 kW *Catagunya* station (1962). The lower Derwent stations *Meadowbank* (40 000 kW), *Cluny* (17 000 kW) and *Repulse* (28 000 kW) were completed during 1967 and 1968.

The Mersey-Forth Scheme

Construction of the Mersey-Forth development in north-western Tasmania was completed in 1973. Four rivers, the Fisher, Mersey, Wilmot and Forth, have been exploited by a combination of seven power stations and seven large dams. The power stations are *Rowallan* (10 450 kW), *Fisher* (43 200 kW), *Lemonthyme* (51 000 kW), *Wilmot* (30 600 kW), *Cethana* (85 000 kW), *Devils Gate* (60 000 kW) and *Paloona* (28 000 kW).

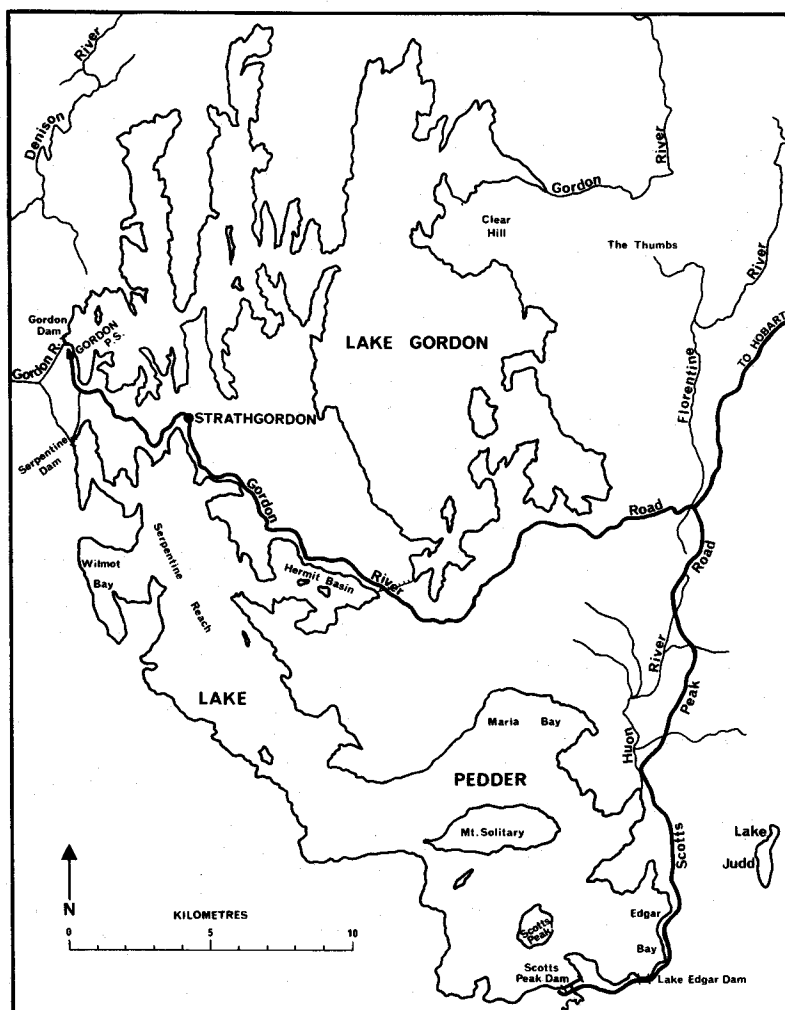
All seven power stations are designed for fully automatic operation and are remotely controlled from a centre near Sheffield.

The Tasmanian Generating System



Bell Bay Thermal Station

This station was originally designed to accommodate two oil-fired steam driven 120 000 kW generators. Installation of the second turbo-generator was completed in 1974.

Gordon River Development—Stage 1**Present Developments****Gordon River Power Development—Stage 1**

Initial development, completed in 1978, has created the largest fresh-water storage in Australia, six times the volume of the Great Lake, and three times the volume of Lake Eucumbene, the largest lake in the Snowy Mountains Hydro-Electric Authority Scheme.

The Gordon River Power Development comprises two lakes joined by the McPartland Pass Canal, with a total surface area of about 510 sq km. Lake Gordon (1974) was created by a 137 metre high dam on the Gordon River: three dams, one on the Serpentine River (1971) and two on the Huon River (1972), created the greatly enlarged Lake Pedder.

From Lake Gordon water is carried by a vertical shaft to the power station, 186 metres underground. Access to the Gordon Power Station is via the busbar and lift shaft or by road tunnel. The station is operated by remote control from Hobart, 161 kilometres away.

Initially, only two generators have been installed in the Gordon Power Station, each with a generating capacity of 144 000 kW. Three additional generators of 144 000 kW each are to be installed progressively as peak load demands increase, giving a final, total generating capacity of 720 000 kW for this station. The sustained generating capacity of the Gordon River Power Development, Stage 1 will be only a fraction of its total (peak load) capacity. It is estimated that the scheme should be able to sustain an average loading of about 168 000 kW during years of normal rainfall to produce an average output of 1 472 million kWh of electricity per annum (i.e. the sustainable average load will be only about 23 per cent of the final installed generator capacity of 720 000 kW).

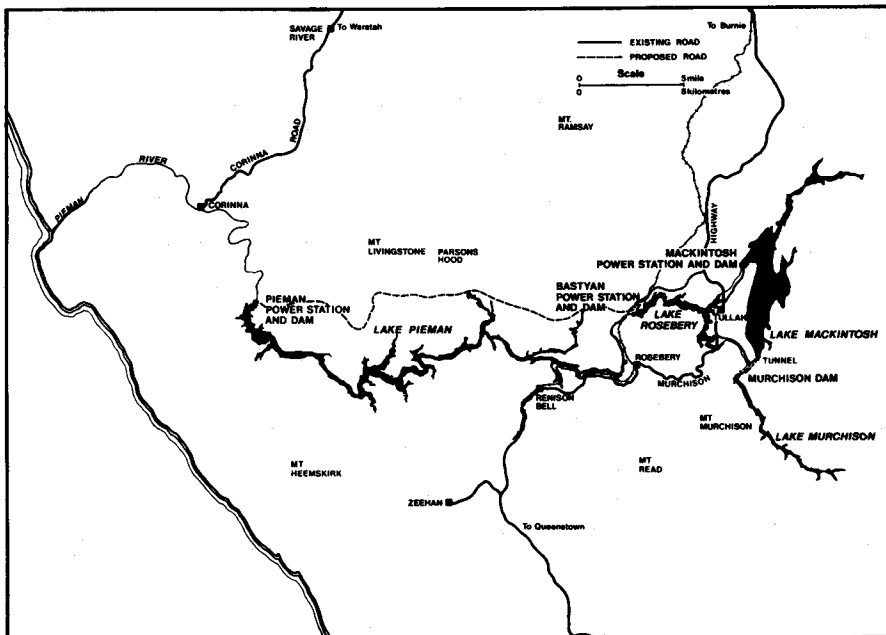
The map on page 248 shows Stage 1 of the Gordon River power development.

Pieman River Power Development

In a report presented to Parliament on 21 October 1970, the Hydro-Electric Commission announced a power development in the Pieman River catchment of the west coast. The total capital cost was estimated at \$134 million (1970), the total installed capacity at 418 500 kW, and the eventual average output at 1 770 million kilowatt hours per annum. Completion of the scheme is expected by 1986. The estimated final capital cost had risen to \$440 million by mid-1978.

Location: The Pieman River flows from the confluence of the Murchison and Mackintosh Rivers, entering the sea below Corinna (see map). The catchment area of 2 678 square kilometres is mostly rugged, mountainous Crown land, experiencing annual rainfall between 2 300 mm and 3 560 mm. Only 2 per cent (62 square kilometres) of the catchment area will be inundated.

Pieman River Development



Power Stations: The development will comprise three elements each including a power station:

(i) **Mackintosh.** This scheme will include a dam over 91 metres high on the Murchison River; a 2 072 metres long tunnel from Lake Murchison to Lake Mackintosh; a dam 76 metres high on the Mackintosh River about three kilometres downstream from the Sophia River junction and the subsidiary Tullibardine Dam (24 metres high) together creating the main storage of the entire development; and a 72 000 kW power station below the Mackintosh Dam through which the combined flows of the Mackintosh and Murchison Rivers will pass.

(ii) **Bastyan.** Will include: a dam about 73 metres high, located on the Pieman River upstream from the Rosebery township, creating a lake extending up the Mackintosh River to the Mackintosh Power Station and up the Murchison River to just downstream of the Murchison Dam; a power station immediately below the Bastyan Dam (installed capacity 76 500 kW); the relocation of two kilometres of the Murchison Highway including new bridges over the Murchison and Mackintosh Rivers; and the relocation of about three kilometres of the Emu Bay Railway, including a new bridge over the Pieman River.

(iii) **Pieman.** Will comprise: a dam about 119 metres high located on the Pieman River immediately upstream from its junction with Stringer Creek; a subsidiary dam 15 metres high; a 270 000 kW power station, located at the junction with Stringer Creek; and a main access road, the Pieman Road, 54 kilometres long, from the Murchison Highway to the dam site, about 10 kilometres upstream from Corinna.

Proposed Future Developments

In June 1977, the Hydro-Electric Commission released details of two alternative schemes which it considered would provide the best means of developing the hydro-electric power potential of the Lower Gordon, King and Franklin River systems on Tasmania's west coast. These two alternatives were based on the findings of preliminary investigations; a firm proposal favouring one or other of them (possibly with some modifications) would be submitted to Parliament for consideration in approximately two years time, following more detailed engineering and scientific studies. The H.E.C. calculated that even if the State's electrical energy demand continued to increase at only the rate of growth experienced over the last three years, demand would double by 1995. Following completion of the Pieman River Scheme, the Lower Gordon region will present the only remaining undeveloped area of the State suitable for large-scale hydro-electric development. An outline of each of the two alternative schemes is included in the 1978 edition of the *Year Book*.

Growth of the Electricity Generating System

The following table shows the growth of the system in recent years:

Hydro-Electric Commission: Operating Statistics

Year	Total rating of alternators (a)	Units generated	Peak loading	Average loading	Annual load factor (b)
	kW	million kWh	kW	kW	per cent
1972.....	1 279 200	5 659	856 200	646 000	75.4
1973.....	1 322 400	5 850	891 100	667 822	74.9
1974.....	1 443 800	5 994	917 300	684 236	74.6
1975.....	1 443 800	5 773	891 500	659 020	73.9
1976.....	1 443 800	6 373	943 400	725 543	76.9
1977.....	(c) 1 494 100	6 756	1 029 500	770 900	74.9

(a) At 31 December.

(b) Average annual loading as a percentage of annual peak loading.

(c) The total generator capacity shown for completed stations in the table in the earlier section 'Early Development and Current Generating Capacity' less 'Gordon (Stage 1)'.

Load Factor

The alternator rating (i.e. installed generator capacity) is necessarily much higher than

the peak loading since some generating plant must be held in reserve against the possibility of breakdown. Also, reliability varies according to the state of the water storages. (The sustainable average annual loading bears little relation to the total installed generator capacity. Prior to the commissioning of the first 144 000 kW generator in the Gordon Power Station in January 1978, hydro-electric power generation in Tasmania was running well in excess of that sustainable by long-term water yields.)

A power system must be designed to meet both the peak loading (the demand component) and the average loading (the energy component). Peak loading tends to represent high demand for relatively short periods, i.e. it has relatively little energy associated with it. The obvious design and operational problem is to create sufficient capacity to meet peak loading and, at the same time, to encourage the use of power so that the highest possible average loading is obtained. The cheapest system from the consumer's point of view, will be the one with the highest load factor. By world standards, the load factors in the previous table indicate a high standard of design and operational efficiency.

The Hydro-Electric Commission

The Hydro-Electric Commission is an autonomous statutory authority, responsible almost entirely for the conduct of its own affairs. The 'Minister Administering the Hydro-Electric Commission' is answerable to Parliament for the activities of the Commission, but the Commission is not directed by nor responsible to the Minister as is a government department. In other words, the Commission is envisaged as a trading or business organisation, and the purpose of the legislation that created it was to remove it from day-to-day political control. The power exerted by Parliament is mainly financial, not over the ordinary revenue and expenditure of the authority, but over the supply of loan moneys for new capital works.

Two other restrictions on the Commission can be listed: (i) it cannot change its tariff charges for the supply of electricity to consumers except with the approval of the Governor-in-Council; and (ii) in certain of its dealings, such as in real estate, the Commission must obtain the approval of the Minister.

The status of the Commission was described thus by the High Court of Australia in a judgment delivered in 1950: 'In the eye of the law the corporation is its own master and is answerable as fully as any other person or corporation. It is not the Crown and has none of the immunities or privileges of the Crown. Its servants are not civil servants and its property is not Crown property.'

Organisation

Under the Commission, with its full-time Commissioner and three part-time Associate Commissioners, there are five branches:

(i) *Civil Engineering Branch.* Responsible for survey of water resources; design and construction of all civil works involved in power development and allied projects.

(ii) *Electrical Engineering Branch.* Responsible for studies of load growth and system development; design and construction of all electrical engineering works in conjunction with the Civil Engineering Branch.

(iii) *Power Branch.* Responsible for: operation and maintenance of completed power developments; generation and transmission of power in bulk.

(iv) *Retail Supply Branch.* Responsible for: distribution of electricity to consumers; operation and maintenance of the distribution system; inspection of installations and equipment; consumer advisory activities; sale of electrical appliances; licensing of wiremen and contractors.

(v) *Secretarial.* Responsible for: general administrative business of the Commission with subsections dealing with accounts, law, personnel, transport, stores and purchasing, medical services, central records, public relations and other services.

Technical Details

Generation

The total installed generator capacity of the Commission's 25 power stations is 1 782 100 kW. All stations generate alternating current at a frequency of 50 cycles per second. The power is stepped up at each station to the voltage required for transmission.

Transmission

Power is conveyed from the power stations by 220 000, 110 000 or 88 000 volt transmission lines to major sub-stations at various load centres. All power stations (except those on King and Flinders Islands) and major sub-stations are linked into a grid system, thereby increasing the reliability of supply to all parts of the State.

Distribution

Power is distributed from the major sub-stations by a network of 44 000, 33 000, 22 000, 11 000 and 6 600 volt feeder lines from which power is stepped down at zone sub-stations to a lower feeder voltage and/or finally at distribution sub-stations to 415/240 volts for supply to individual consumers. Some consumers take supply at feeder voltage.

Bruny Island is connected to the main power supply by a submarine cable; King and Flinders Islands are partly supplied by diesel-generation stations operated by the Commission at Currie and Whitemark, respectively.

Retail Distribution

In the early days of the Commission's operation, consumers of electric power received it from three sources: from municipalities with their own generating capacity; from municipalities retailing power bought from the Commission; and from the Commission direct. Gradually uniformity was achieved, municipalities stopped generating and retailing and the one authority became the sole supplier, both of bulk power to industry and retail power to homes, shops, businesses, etc. One effect has been uniformity in tariff charges for retail power so that the farmer on the most remote holding is charged no more than dwellers in the principal cities. Tasmania has achieved an Australian record figure for distribution of electric power—it is estimated that nearly 99 per cent of homes and farms are now connected. Tariff charges are also lower than for any other state.

Finances of Hydro-Electric Commission

The table that follows shows the Commission's income and expenditure:

Hydro-Electric Commission: Income and Expenditure
(\$'000)

Particulars	1973-74	1974-75	1975-76	1976-77
INCOME				
Sales—Bulk	21 581	23 382	24 380	28 814
Retail	30 136	36 208	45 443	50 079
Other income	1 013	2 705	2 876	1 479
Total	52 730	62 295	72 699	80 372
EXPENDITURE				
Operation, distribution, administration ..	19 385	24 646	27 871	30 593
Interest on loans and reserves	28 899	32 008	37 552	44 239
Less interest capitalised	-5 298	-7 782	-10 040	-14 378
Depreciation provision	5 760	5 984	6 184	6 297
Superannuation contribution and retirement benefits	2 968	4 530	5 784	7 572
Contribution to consolidated revenue ..	1 362	1 430	1 712	1 604
Fuel cost equalisation provision	—	—	2 000	3 000
Other expenditure	950	1 054	1 249	1 364
Net profit or loss	-1 296	425	387	81
Total	52 730	62 295	72 699	80 372

All annual charges (interest, depreciation, operation, etc.) are borne by the Commission out of its revenue from the sale of electricity.

Sales and Prices of Electric Power

The following table shows comparative average prices for power in Australia:

Price of Electric Power: Tasmania and Other States, 1976-77 (a)
(Cents per Kilowatt Hour)

State or territory	Residential sales	Commercial sales	Industrial sales	Average all sales (b)
New South Wales	2.97	(c)	(c)	3.03
Victoria	2.90	4.55	2.47	3.08
Queensland	3.64	5.66	2.93	3.80
South Australia	2.50	3.96	2.20	2.75
Western Australia	3.80	(c)	(c)	3.89
Tasmania	2.27	3.79	0.92	1.28
A.C.T.	2.12	(c)	(c)	2.52
Average	2.99	n.a.	n.a.	2.98

(a) Source: 'Statistics of the Electricity Supply Industry in Australia' (published by the Electricity Supply Association of Australia).

(b) Includes power for traction, public lighting, etc., not specified in first three columns.

(c) Not recorded separately.

The Tasmanian average is the *lowest* and the householder pays less per unit (kWh) on the average than his counterparts in other states. The economy of hydro-electric generation can be best obtained by comparing the prices charged to industrial users.

The following table shows the amount of power sold in Australia:

Sales of Electric Power: Tasmania and Other States, 1976-77 (a)
(Million Kilowatt Hours)

State or territory	Residential sales	Commercial sales	Industrial sales	Total sales (b)
New South Wales	9 880	(c) 13 002		23 484
Victoria	6 681	2 952	5 603	15 649
Queensland	3 262	1 506	2 945	7 766
South Australia	2 236	983	2 021	5 278
Western Australia	1 490	(c) 2 089		3 615
Tasmania	1 295	163	4 625	6 149
A.C.T.	581	(c) 464		1 070
Total	25 425	(c) 36 353		63 011

(a) Source: 'Statistics of the Electricity Supply Industry in Australia' (published by the Electricity Supply Association of Australia).

(b) Includes power for traction, public lighting, etc., not specified in first three columns.

(c) Not recorded separately.

EDGELL DIVISION OF PETERSVILLE LTD: DEVONPORT AND ULVERSTONE PRODUCTION CENTRES

(This article was contributed by the Company)

Introduction

Vegetable processing began in Tasmania in 1942 when, during the War, three dehydration factories were set up by the Commonwealth Government. The code names of these factories were: Dewcrisp in Scottsdale; Dewpearl in Ulverstone; and Dewpoint at Smithton. In 1944 a vegetable canning factory was established in Devonport and operated with the assistance of the H. J. Heinz Company.

After the War Dewpearl at Ulverstone became a fish cannery. Subsequently it became a vegetable canning/freezing plant and now produces frozen and dried potato products for the Edgell Division of Petersville Ltd. The Devonport plant of the H. J. Heinz Company was purchased by Gordon Edgell and Sons Ltd in 1955 and is now also a vegetable freezing/canning plant of the Edgell Division.

These two plants form part of the largest operating division within the all Australian-owned Company, Petersville Ltd. The Divisional Head Office is located in Sydney with other production centres in Manly (Queensland), Bathurst, Cowra and Gosford (N.S.W.), Dalmore (Victoria) and Blenheim and Renwick (New Zealand).

The Tasmanian operations possess the most modern facilities, processing equipment and techniques to produce a large volume of frozen, canned and dried products.

The factories draw their raw material from the rich, red soils of the northern part of the State, from Wynyard in the north-west to Cressy in the north. This area possesses a temperate climate, a regular rainfall and mild summers, providing ideal conditions for the growing of potatoes, green peas, green beans, carrots, beetroot, cauliflowers, Brussels sprouts, broccoli, onions, white and swede turnips and celery. The approximate annual requirement of raw material for production is 90 000 tonnes.

The mixed farm enterprise, favoured by North-West Coast farmers, provides the commitment and expertise necessary to grow high quality, high yielding vegetable crops. The Company supplies the seed, contracts with farmers to grow its vegetable requirements and maintains a service to ensure weed and pest control during the growth of the crops. The production of vegetable crops for processing is a major income source for over 800 farmers and is an important element in the economy of the region. At the peak production periods, employment in the Edgell plants in Tasmania swells to approximately 650 persons, with harvesting and farm labour providing additional employment opportunities.

The Company assists in the growth of many organisations which service the industry. Fibre board container and can manufacturers, harvesting contractors, transport operators, municipal councils, and suppliers of seed, power, fuel and equipment all benefit from the industry. Technical service is provided by the Company's own technical officers, with assistance from the State Department of Agriculture and farmer organisations.

Vegetable Processing

The production of canned and frozen vegetables, being a seasonal operation, starts with the planning of the various crops required and the selection of suitable varieties. Optimum growing periods, yields and distance from the processing plant must be considered. All crops are grown under contract where the seed, planting time and the ultimate harvest date are controlled by the processor.

Quality factors such as maturity, colour, flavour, size and absence of defects must be assessed during the growing period and these ultimately determine the harvesting time.

Harvesting

In recent years there has been considerable development in the machine harvesting of vegetables used for processing and at present green peas, green beans, yellow wax beans, broad beans, carrots, potatoes, swedes and onions are machine harvested by the various types of equipment available. Brussels sprouts are harvested by hand but work is proceeding on developing machines suitable for harvesting this crop.

In 1976 the pea-pod picker was introduced, replacing mobile viners. The modern machine uses some of the basic principles developed by Madame Faure with her invention of the pea sheller in 1883.

Preparation

The preparation methods for both canning and freezing of vegetables are almost identical and the following is a brief description of some of the equipment and processes used:

Conveying: Various methods of conveying vegetables between the different stages of preparation are used. Some of these are bucket-type elevators, vibratory conveyors, flumes, hydraulic pumps and pneumatic systems.

Screen Cleaning: Different sized vibratory screens are used to remove the over-size and under-size waste material.

Pneumatic Cleaning: This type of cleaner uses a blast of air to remove rubbish from the harvested raw material. By varying the air velocity, light waste material can be separated or, alternatively, by using a stronger blast the product can be recovered from heavier waste material.

Froth Flotation Cleaning: These cleaners employ a froth solution in which small bubbles of air are incorporated in an emulsion of water, oil and soap by vigorous agitation. Using the principle of flotation, extraneous vegetable material can be floated off and the sound material recovered. Normally these cleaners are used on green peas and broad beans. All cleaning sections utilise large quantities of water and conservation by recycling waste water is now being practised.

Lye Peeling: This involves using hot caustic soda solution to remove the skins of root vegetables. The strength of solution, temperature and time of peeling depend on the thickness and texture of the skin to be removed. Thorough washing with cold water is required after such treatment.

Beans require some specialised equipment which is not normally used for the other vegetables: cluster cutters separate and sever the beans from bunches; snippers 'top' and 'tail' the beans; cutters cut across the beans and slicers slice along them.

Blanching: This is necessary for all canned and frozen vegetables. The prepared product is passed through steam or hot water for periods of up to six minutes at temperatures up to 100°C. This process achieves the inactivation of enzymes and the removal of oxygen from the tissue of the vegetable.

Visual Inspection: All products are visually inspected during preparation. The product is conveyed along a slowly moving belt under the eyes of inspection personnel.

Following its preparation, the product is transferred to the canning or freezing sections to complete the processing.

Canning

Canning involves the following steps:

Filling and Brining: The required quantity of prepared vegetable is placed in a can and topped up with boiling brine.

Closing: The hot, filled cans are closed and sealed immediately. This is a critical stage of the process and expert maintenance is required to keep the closing machine operating correctly to ensure the complete removal of air prior to closing.

Sterilising: The closed cans are cooked or sterilised by superheated steam at temperatures up to 121°C for 30-40 minutes. Next the cans are cooled and are then ready for labelling.

Freezing

There are two main methods of freezing vegetables: the down-draught method in which the refrigerated air passes down through a moving belt loaded with the prepared, blanched, inspected product; and the fluidised bed freezer method in which an up-draught of cold air lifts, freezes and moves the product through a freezing-tunnel. The frozen vegetables are

packed down in bulk and held in cold storage until required for packaging in sizes appropriate for retailing.

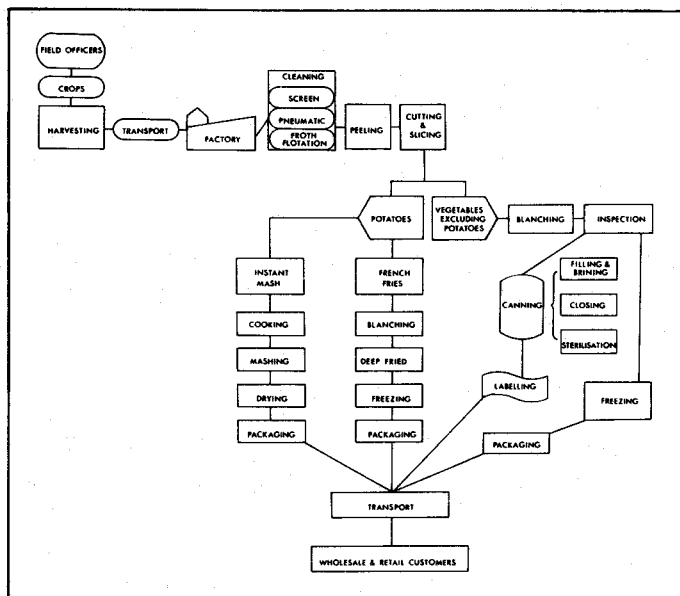
Potatoes

Potatoes in granule or French-fried form are handled at the Ulverstone production centre. Standard preparation, washing and peeling methods, as already described, are employed.

Instant-Mash (Granules): After slicing, the potatoes are fed via a weigh-belt to a hot water cooker, then cooled, with cooking being completed in an atmospheric steam cooker. Mashing is conducted in a double shaft mixer at which point a proportion of partially dried product is added back to assist mashing and reduce overall moisture. Additives to improve texture and shelf life are also metered at this stage. After a period of equilibration, drying commences through a series of three dryers involving air lift and fluidised bed principles. The second drying stage is followed by vibrating sieves which separate the product into coarse reject material, intermediate fractions for add back and a fine fraction which is further dried to obtain the finished product. This may be packaged in containers ranging from 113 gram to 16 kilogram capacity with ingredients such as seasoning, milk powder and onion added as required.

French Fries: After size grading, the potato strips are inspected to remove any defects, then water-blanced to obtain the required texture and colour. Further colour control is obtained by immersion in dilute dextrose solution. The strips are drained of excess moisture then part-fried in continuous fryers to give a product which can be fully cooked by reheating in hot oil for two to three minutes. Frying oil quality is maintained by continuous screening and filtration. Following removal of excess oil, the product is frozen in a continuous belt tunnel and then size graded into longer and shorter units at which stage there is a further visual inspection. The longest material is packed for catering sales whilst the remainder is used for retail purposes. Packaging is performed on automatic form-fill-seal equipment and carton sealers, the cartons being transferred by conveyor to cold storage.

Vegetable Processing: Edgell Division of Petersville Ltd



Conclusion

The growth since the War years of the vegetable processing industry in Tasmania has been steady rather than spectacular and provides a firm base for consolidation in the future.

Growth, however, will remain tied to the growth in Australia's population or changes which may occur in the eating habits of Australians. Of Edgell's Tasmanian production, only a very small percentage is sold in this State and mainland markets provide the major growth potential for the State's processed vegetables.

Tasmania, therefore, tends to be disadvantaged due to distance and isolation from its main markets and to transport costs, although the latter situation has been partly alleviated by the Commonwealth Freight Equalisation Scheme.

The development of canned and frozen export markets, although being constantly probed, is hampered by the high production costs compared to the North American and New Zealand producers who currently service the Asian market.

Raw materials, facilities, techniques, and expertise exist to take advantage of future market growth if cost containment can be achieved.

ARMED FORCES FOOD SCIENCE ESTABLISHMENT

*(This article was contributed by the Armed Forces Food
Science Establishment at Scottsdale)*

Historical

As part of Australia's war effort in World War II, factories for the production of dehydrated vegetables were established in rural areas of south-eastern Australia. At the end of hostilities, most of these factories closed down or were converted to other uses; by the early 1950s the establishment at Scottsdale, known as Dewcrisp Products Ltd, was the only remaining large-scale vegetable dehydrator in Australia. At this stage, the Federal Government showed a renewed interest in several areas of defence food research, including a concern for studies on compressed dehydrated vegetables. A food research station was established at Scottsdale for this type of work.

The research originally conducted at Scottsdale on compressed dehydrated vegetables made a worthwhile advance in this technology on the world scene and resulted in more economical production with less loss of food value.

Meanwhile, another Armed Services feeding development unit had begun in Melbourne in 1954, but activities there were hampered by a lack of suitable facilities. In 1958, Cabinet decided that all defence food research should be conducted under Army administration, as the Army was the major user of specialised feeding systems such as ration packs. The research station at Scottsdale then became the Army Food Science Establishment. In 1965 a new block was added for administration and in 1971 an experimental processing building, new boiler house and laundry and store were erected. By 1971 the range of activities of the Establishment had expanded to cover work for all three Services, and this was reflected in a change of name to 'Armed Forces Food Science Establishment'. In 1977 a large, new, prefabricated store was added.

A reorganisation of the Services and the Defence Department in 1975 resulted in increased integration of the organisations concerned with Australia's defences. Laboratories from five different departments were formed into the single Defence Science Division. As a result of this change, the Armed Forces Food Science Establishment (AFFSE) became part of the Service Laboratories and Trials Division in the Australian Defence Scientific Service. In mid-1978 it employed a total staff of 33 (28 civilians and 5 military personnel).

Functions

The basic function of the Establishment is to determine the energy and other nutrient requirements of Servicemen under the various conditions in which they may be required to operate and to translate these requirements into practical ration scales and ration packs

suitable for use under Service conditions. This is a wide field and the activities of the Establishment range from the study of feeding systems in static messes, where methods are very similar to any other large-scale catering operation, through field cooking of fresh foods, to the design of ration packs for use in highly mobile operations such as patrolling and to the development of emergency and survival rations.

Organisation

The Establishment is organised into the following sections: Food Science; Food Technology; Nutrition and Physiology; Experimental Processing; Engineering Design and Maintenance; and Administration. However, the Establishment operates on an integrated basis as many tasks involve more than one section.

The *Food Science Section* has responsibility for chemical and microbiological analysis of foods. Chemical analyses are conducted for protein, fat, ash, minerals and vitamins. As well as these analyses, gas chromatographic and spectrophotometric facilities are available for investigation of odour, pesticide and other problems requiring the separation and identification of trace compounds. Facilities are available for trace metal analysis and automated analytic methods are being introduced. Microbiological examinations are conducted on locally produced and other food samples for quality control purposes and investigations are conducted to determine standards which ought to be expected in commercial production. Facilities available are adequate for the determination of total viable plate counts, detection of yeasts and moulds, and the culture and identification of possible food contaminants such as enterobacteriaceae, staphylococci, salmonella, shigella and coliforms.

The *Food Technology Section* is concerned with the production and packaging of non-perishable food items. In addition to these responsibilities this Section runs a taste panel which assesses the acceptability of foods for inclusion in rations. As it is considered that water may be more accessible than food in most areas likely to be of interest in Australian defence, and as most food items contain 60 to 90 per cent water, there is considerable interest in dehydration of foods for use in rations. Consequently, the Food Technology Section is well equipped for studies in dehydration and has roller, tray, belt, trough, bin and freeze drying equipment. Equipment is also available for other forms of food research and the Section sometimes makes use of the equipment mentioned in connection with food science.

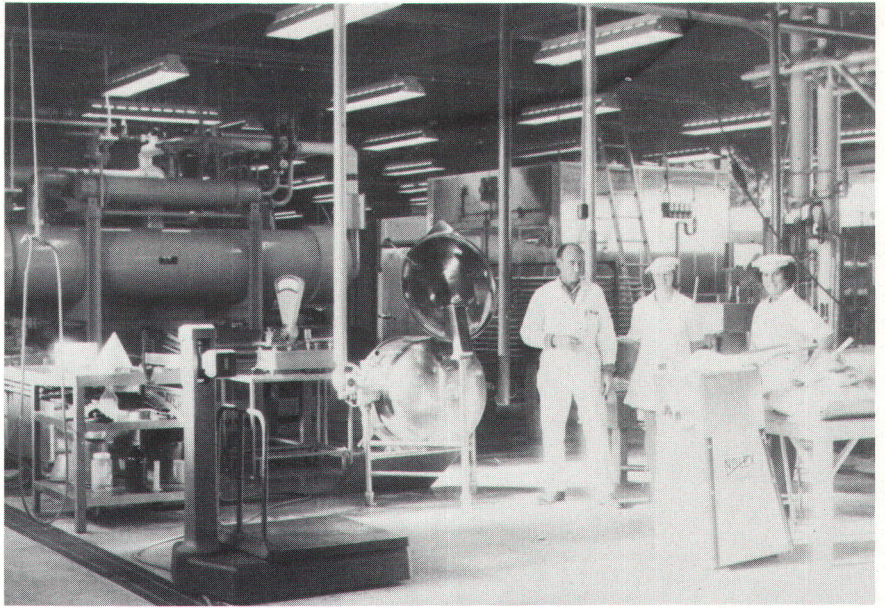
The *Nutrition and Physiology Section* is concerned with estimating the amount of food required for various activities and determining the effectiveness with which it is used. Food requirements are studied by determination of the energy cost of various activities associated with military operations and by analysis of the results of physiological and biochemical tests on men under varying conditions. Nutritional investigations carried out include studies of food consumption and wastage in messes, from which it is expected that better and more efficient feeding systems will be developed. Other studies are concerned with the acceptability of items in ration packs. Knowledge of the serviceman's reaction to different ration items is combined with nutritional information in the design of rations which will be adequate nutritionally and will also be reasonably appetizing. Physiological studies are also made on men under survival conditions to evaluate food and water requirements.

The *Experimental Processing Section* works closely with the Food Technology and Engineering Sections. This Section has two functions. One is to produce sufficient quantities of new products for field trials on a large enough scale to gauge service suitability, while at the same time determining any changes that are necessary in scaling up manufacture to a commercial level. The second function of the Section is to produce Service food components for which the peace-time demand is insufficient to attract commercial manufacturers.

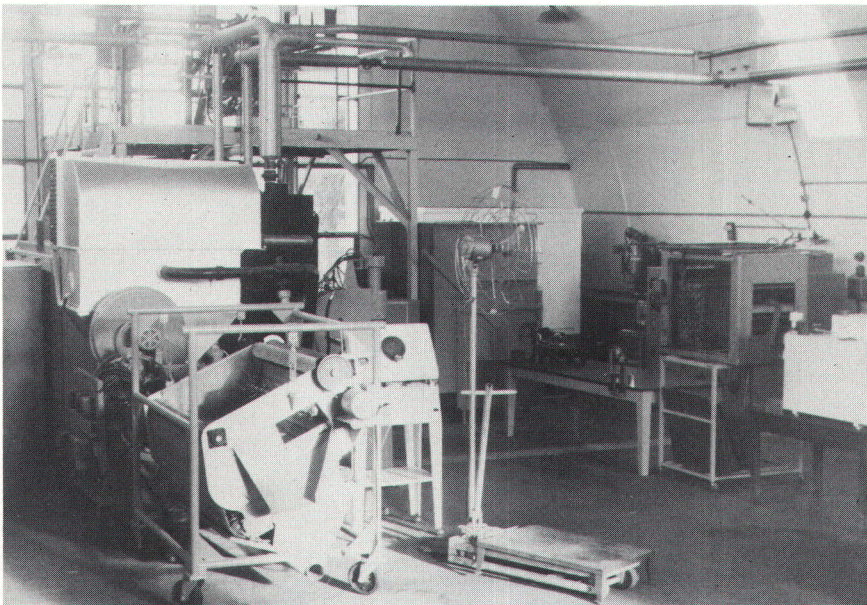
The *Engineering Design and Maintenance Section* carries out routine servicing and maintenance, and co-operates with the Food Technology Section on improving processing conditions in the experimental processing area. It has well-equipped workshops where new pieces of equipment can be fabricated, if required, for developments in technology.

The administration block includes a library with a wide range of scientific books and periodicals used by professional and technical staff.

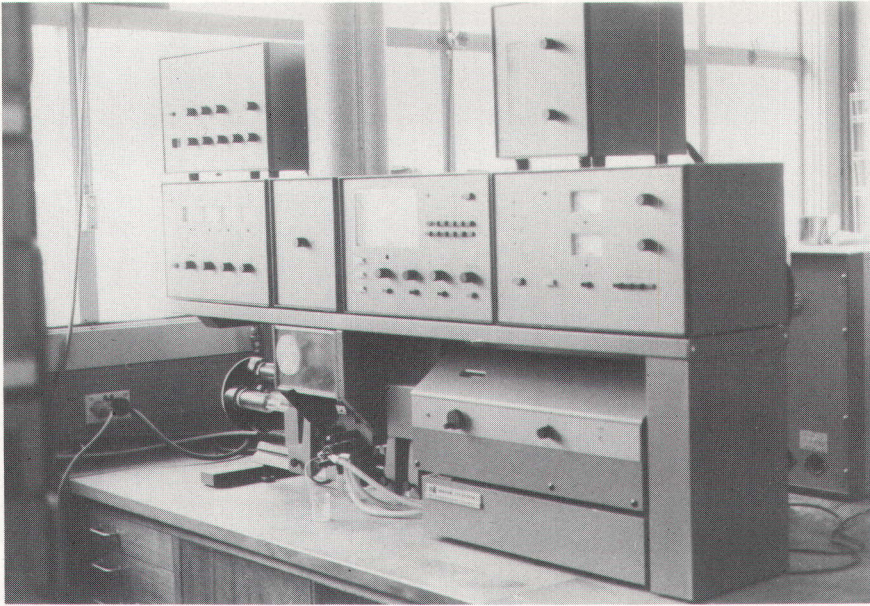
Some of the experimental food processing machinery at AFFSE



[Armed Forces Food Science Establishment]



The Food Technology Section showing pilot scale food dehydration equipment



Atomic absorption spectrophotometer in the Food Science Section

[Armed Forces Food Science Establishment]

Food processors preparing an experimental batch of food



Products

Major tangible products produced by the Establishment are freeze-dried composite meals and other freeze-dried items for use in combat rations. An 'Emergency Flying Ration', developed at Scottsdale for installation in the ejection seats of service aircraft, has been exported to the United Kingdom and is used by the Royal Air Force. A number of innovations introduced by the Establishment for defence purposes have been adapted for use by the civilian population, e.g. survival rations for maritime purposes and water sterilising tablets for use in areas where water quality is suspect.

(An article on the Armed Forces Food Science Establishment also appeared in the 1972 Year Book—pp. 332, 333)

Further References

A.B.S. Publications Produced by the Tasmanian Office:

Manufacturing Census, Preliminary Results Analysed by Statistical Divisions, Tasmania (8201.6) (annual; 1975-76 issue released 19-7-77).
Manufacturing Establishments, Details of Operations and Small Area Statistics, Tasmania (8202.6) (annual; 1975-76 released 21-6-78).

A.B.S. Publications Produced by Central Office, Canberra:

Census of Manufacturing Establishments (Preliminary Statement), Summary of Operations by Industry Sub-division, Australia (8201.0) (annual; 1976-77 released 26-5-78).
Manufacturing Establishments, Summary of Operations by Industry Class (8202.0) (annual; 1976-77 released 6-10-78).
Manufacturing Commodities, Principal Materials Used (8210.0) (annual; 1974-75 released 27-4-78).
Publications with Catalogue numbers ranging from 8301.0 to 8356.0 give details of production of a wide range of goods. Most of these publications are of one or two pages and are released mainly on a monthly basis. Details of these can be found in the *Catalogue of Publications* (Catalogue No. 1101.0) which is available at any office of the Bureau.

Other Publications:

Tasmanian Manufacturers Directory (produced annually by the Department of Planning and Development, Hobart).

Chapter 10

TRADE AND DISTRIBUTION

OVERSEAS AND INTERSTATE TRADE

Historical

The *Statistical Returns of Van Diemen's Land* and the *Statistics of Tasmania* provide a continuous series of total trade statistics dating from 1824 to 1909. Until the foundation of the Commonwealth in 1901, trade with other parts of Australia was recorded as originating from or being destined for 'British Colonies'; in other words, all Tasmanian sea trade was regarded as overseas. From Federation to 1909, statistics were collected and compiled by the newly formed federal Customs Department for *all* sea trade, but since 1910 only direct *overseas* trade has been recorded by Australian Customs. In an island state, it became apparent that statistics of overseas trade alone were inadequate to record economic activity and, from 1922-23, the Government Statistician collected and published details of interstate trade. The collection of these data, now undertaken independently (from Australian Customs) by the State Office of the Australian Bureau of Statistics, depends primarily on documents made available by Tasmanian port authorities. In brief, there is a *total* trade series (1824-1909), an *overseas* trade series (1910 to 1921-22) and a *total* trade series (1922-23 to today).

In the immediate post-war period, there was a marked expansion of commercial aviation; the freight being carried was a component of interstate trade and steps were taken to record it, the first published figures appearing for 1949-50. Thus, the total trade of Tasmania is now recorded in three categories: by sea, overseas; by sea, interstate; by air, interstate.

Values of Trade from 1824

Note on Currency

The pre-Federation details were recorded in sterling; subsequent details were recorded in £A which had parity with sterling until 1930 when devaluation made £A1·25 equal to the £ sterling. In 1949 the £ sterling was devalued by 30·5 per cent and the £A was correspondingly devalued to preserve the 1930-1949 relativity. In 1966 Australia changed to decimal currency, with \$A equal to £A0·5. In late 1967, the £ sterling was devalued from an equivalency of \$A2·51 to \$A2·15. The \$A was devalued by approximately 2·25 per cent against the £ sterling in 1971. The exchange rate between the \$A and £ sterling is no longer fixed and from December 1971 the \$A has been quoted in terms of \$U.S. Later changes in the exchange rate appear in Chapter 12, Private Finance. In the tables in this section, pre-1966 recorded figures have been converted to \$A by simply doubling the originals, *irrespective of their year of occurrence* and no account has been taken of changes in exchange rates. Post 1966 figures similarly have not been adjusted to take account of changes in exchange rates.

Due to considerable and persistent changes in the purchasing power of money, it is extremely difficult to satisfactorily interpret any long-term statistical series expressed in money terms. The following table is therefore of interest historically but subject to all the disabilities (including changes in the value of Australian currency) associated with long-term money series.

Total Value of Trade by Sea and Air: Historical Summary
(\$'000)

Year	Value of imports				Value of exports			
	By sea		By air	Total	By sea		By air	Total
	Overseas	Interstate	Interstate		Overseas	Interstate	Interstate	
1824	n.a.	n.a.		124	n.a.	n.a.		30
1860	1 686	450		2 136	1 544	380		1 924
1880	738	2 000		2 738	1 568	1 456		3 024
1900	1 402	2 746		4 148	3 078	2 144		5 222
1910	1 662	(a)	n.a.	n.a.	1 040	(a)	n.a.	n.a.
1919-20	1 626	(a)		n.a.	4 022	(a)		n.a.
1929-30	3 668	16 028		19 696	4 978	13 198		18 176
1939-40	3 188	21 780		24 968	4 852	20 954		25 806
1949-50	18 704	51 218	(b) 10 670	80 592	29 936	42 672	(b) 3 996	76 604
1959-60	27 606	130 014	19 210	176 830	47 730	137 530	20 818	206 078
1969-70	46 998	257 441	20 551	324 989	143 470	286 083	26 287	455 840
1976-77	94 622	564 231	30 909	689 762	338 657	485 850	35 160	859 667

(a) Collection discontinued for period 1910 to 1921-22.

(b) First collected in 1949-50.

Definition of 'Overseas' and 'Interstate'

Statistics of overseas trade of Tasmania include details of goods landed directly from overseas or shipped directly to overseas ports; and, in addition, details of goods transhipped through other Australian states, *provided that the overseas import or export document has been lodged with Customs in Tasmania*. Statistics of interstate trade include details of goods landed in or shipped from other Australian states; and, in addition, details of goods transhipped through other Australian states, *provided that the overseas import and export document has been lodged with Customs in another Australian state*.

By way of example, a new Japanese car transhipped in Melbourne and discharged in Tasmania is classified as an item of interstate trade. Victoria, not Japan, is classified as the place of origin, provided that the overseas import document has been lodged with Customs in Victoria.

Effect of Motor Vehicles on Total Value of Imports and Exports

Import and export details of motor cars and commercial vehicles include tourist vehicles entering and leaving the State. The following table shows details for recent years:

Motor Cars and Commercial Vehicles (a): Value of Imports and Exports
(\$'000)

Particulars	1971-72	1972-73	1973-74	1974-75	1975-76	1976-77
Imports	63 016	64 943	75 231	98 110	104 305	112 172
Exports	28 229	28 537	28 997	32 524	34 854	36 654

(a) As well as new and used vehicles, includes business and tourist vehicles moving to and from the State.

Since Tasmania does not carry out motor vehicle assembly on any extensive scale (and certainly not for export), it follows that total import and export values for 1976-77 are both inflated by approximately \$37 m worth of vehicles, principally tourist, which entered and left the State. If vehicle exports are offset against imports, the net import figure will still include some used as well as new vehicles.

Source of Trade Statistics

Overseas trade statistics are compiled from documents obtained under the Federal Customs Act 1901 and supplied to the Australian Bureau of Statistics by the Australian Customs. Interstate sea trade statistics are compiled from documents required under the

authority of the *Marine Act* 1976 and made available to the Tasmanian Office of the Bureau by the various port authorities. Statistics of *interstate air* trade are compiled from returns furnished direct to the Tasmanian Office of the Bureau by all those who use this medium for the transportation of goods in commercial or industrial operations.

Values

The cost of importing goods into any country will theoretically contain four elements: (i) the 'original' price at door of factory, warehouse, etc.; (ii) the cost of delivering goods to the ship 'free on board'; (iii) sea freight and associated charges between ports; and (iv) cost of delivery from port to buyer.

Trade statistics base values on the first two elements but exclude the third and fourth as set out in the following definitions:

Overseas Exports: Goods sold to overseas buyers before export are valued at the 'free-on-board' (f.o.b.) port of shipment equivalent of the actual price paid to the exporter. Goods shipped on consignment are valued at the f.o.b. port of shipment equivalent of the current price offering for similar goods of Tasmanian origin in the principal markets of the country to which they are despatched for sale.

Overseas Imports: The recorded value for overseas imports is the 'value for duty' as required for Customs purposes. On 1 July 1976 Australia adopted the internationally recognised Brussels Definition of Value on a f.o.b. basis (i.e. charges and expenses involved in delivering the goods from the place of exportation to the place of introduction in Tasmania, are excluded). The value for duty is based on the normal price (i.e. the price the goods would fetch at the time when duty becomes payable on a sale in the open market between a buyer and a seller independent of each other). In practice, the basis for valuation is generally taken to be the invoice price subject to certain safeguards and adjustments where necessary. This new basis of valuation differs from that used prior to July 1976 which, broadly, was based on the higher of actual selling price or current domestic value (in the country of export) plus charges involved in placing the goods free-on-board the vessel at the port of export. Because of the change in the basis of valuation the recorded overseas import figures from 1 July 1976 are not comparable with those for previous years. It is estimated that if the previous basis of valuation had continued, the value of total overseas imports would have been about 2 per cent higher than the recorded values on the new basis.

Interstate Imports and Exports: These are valued at the f.o.b. port of shipment equivalent of the actual price at which the goods were sold.

Tasmanian Ports

Although there are seven port authorities (usually called marine boards) in Tasmania, overseas trade is restricted to the ports of Hobart, Launceston, Burnie, Devonport and Stanley. (Exports of iron ore from Port Latta are credited to Stanley and exports of woodchips from Spring Bay are credited to Hobart.) The names of ports in subsequent tables refer to the cities or towns in which the controlling port authorities are located. Thus 'Hobart' includes Port Huon, Spring Bay, Howden and Strahan, 'Launceston' includes Bell Bay, Inspection Head and Long Reach; 'Stanley' includes Port Latta; 'Currie' includes Naracoopa and Grassy; and 'Lady Barron' includes Whitemark.

This chapter deals only with the imports and exports passing through these ports. For a description of the major ports and for the financial operations of the port authorities, see Chapter 11.

Total Trade of Tasmania

The following table shows Tasmanian total trade and its components in recent years. It will be observed that interstate trade is the major element both in imports and exports (but includes some goods transhipped through other Australian ports—see definitions above).

**Total Trade
(\$'000)**

Year	Imports				Exports			
	By sea		By air	Total imports	By sea		By air	Total exports
	Overseas	Interstate	Interstate		Overseas	Interstate	Interstate	
1971-72	39 749	281 576	20 622	341 947	178 950	302 608	29 374	510 932
1972-73	45 045	289 862	21 238	356 145	218 712	320 910	30 626	570 247
1973-74	69 277	357 805	24 760	451 843	259 745	404 382	34 566	698 692
1974-75	100 616	402 081	26 850	529 547	226 154	379 933	31 699	637 786
1975-76	76 262	503 497	27 882	607 641	250 580	441 391	36 280	728 251
1976-77	94 622	564 231	30 909	689 762	338 657	485 850	35 160	859 667

The next table shows the balance of trade (excess of exports over imports):

Balance of Trade (Sea and Air)

Year	Balance of trade (excess of exports)		Year	Balance of trade (excess of exports)	
	Total (\$'000)	Per head of mean population (\$)		Total (\$'000)	Per head of mean population (\$)
1971-72	168 985	432	1974-75	108 239	269
1972-73	214 102	543	1975-76	120 610	297
1973-74	246 850	621	1976-77	169 905	415

Overseas Trade by Sea

Details of Tasmania's trade with overseas countries for the past six years are shown in the following table:

**Total Value of Trade by Sea With Overseas Countries
(\$'000)**

Year	Value of imports from—				Value of exports to—			
	Japan	New Zealand	United States of America	Other Overseas Countries	Japan	United States of America	Indonesia	Other Overseas Countries
1971-72	5 049	5 801	4 655	24 244	55 997	27 062	2 945	92 946
1972-73	7 003	7 732	5 986	24 324	75 231	35 434	3 858	104 189
1973-74	12 462	8 252	8 930	39 633	104 880	46 819	7 195	100 851
1974-75	12 931	10 865	14 718	62 102	99 549	33 257	5 710	87 638
1975-76	11 836	10 182	10 039	44 205	110 670	34 339	12 112	93 459
1976-77	15 721	9 497	13 631	55 774	148 191	43 593	15 414	130 459

In 1976-77 Japan was Tasmania's major overseas supplier of imports, followed by the United States of America and New Zealand.

Trade with Selected Countries

The principal countries of origin, together with values (in \$m) for overseas imports shipped direct to Tasmania in 1976-77 were: Japan, 15.7; United States of America, 13.6; New Zealand, 9.5; United Kingdom, 9.3; Canada, 9.2; Italy, 3.9; and Venezuela, 3.3. The principal countries of destination for overseas exports shipped direct from Tasmania (value in

\$m) were: Japan, 148.2; United States of America, 43.6; Indonesia, 15.4; Malaysia, 14.4; India, 12.4; United Kingdom, 12.1; and Thailand, 12.0.

The following table shows the trade of Tasmania with selected overseas countries; countries selected are those for which imports or exports approached or exceeded \$0.5 m in any one of the three years under review, with the exception of countries for which figures are confidential. It should be noted that some goods are received from, or sent to, overseas countries by transshipment through other Australian states; no data are available on such transactions.

Trade With Overseas Countries
(\$'000)

Country of Origin or Destination	Imports			Exports		
	1974-75	1975-76	1976-77	1974-75	1975-76	1976-77
Belgium-Luxembourg	255	119	231	458	5 012	6 964
Canada	7 903	8 131	9 229	1 221	185	993
China—Excl. Taiwan Province	141	98	145	420	3 507	2 093
Taiwan Province only	1 721	1 503	2 888	3 749	5 370	7 799
Czechoslovakia	43	68	72	413	418	745
Denmark	693	344	179	1 018	513	697
France	700	823	1 549	2 868	3 692	4 439
German Dem. Republic	76	2	1	10	1 436	3 949
Germany, Federal Republic	7 657	5 218	2 829	3 658	3 281	3 685
Greece	1	1	8	11	116	1 413
Hong Kong	860	2 444	2 723	4 857	5 550	6 472
India	90	22	110	11 036	3 326	12 421
Indonesia	—	5	11	5 710	12 112	15 414
Iran	2 936	—	906	2 084	701	1 284
Italy	1 913	1 048	3 859	1 876	3 261	4 035
Japan	12 931	11 836	15 721	99 549	110 670	148 191
Korea, Republic of	51	90	2	128	716	741
Malaysia	56	60	82	8 115	5 340	14 389
Netherlands	2 759	548	804	1 583	4 522	4 046
New Zealand	10 865	10 182	9 497	3 096	3 497	4 827
Norway	1 757	642	1 270	198	378	420
Papua New Guinea	—	1	196	1 074	637	929
Philippines	28	13	82	3 290	3 329	4 019
Poland	229	27	61	2 508	1 971	4 978
Puerto Rico	—	—	—	—	—	870
Singapore	2 511	109	1617	4 111	3 184	3 329
South Africa, Republic of	317	563	2 487	251	833	506
Spain	287	156	81	320	244	609
Sweden	4 513	3 206	1 512	1 242	1 163	1 682
Thailand	22	34	189	7 249	8 852	11 983
Turkey	343	158	319	93	47	796
United Kingdom	8 714	8 612	9 253	14 867	11 026	12 144
U.S.A.	14 718	10 039	13 631	33 257	34 339	43 593
U.S.S.R.	41	—	17	2 129	4 049	3 494
Venezuela	—	—	3 295	—	—	15
Yugoslavia	27	16	37	1 048	579	1 503
Other countries	15 441	10 061	9 700	2 534	5 980	3 186
'For orders' (a)	—	—	—	9	23	—
Unknown	—	—	—	114	721	4
Australia (re-imported)	17	83	29	—	—	—
Total	100 616	76 262	94 622	226 154	250 580	338 657

(a) Country of consignment not determined at time of export.

Tasmanian and Australian Overseas Trade

The following table compares Australia's total overseas imports and exports with the corresponding values for Tasmania; by using a per capita comparison, certain conclusions can be drawn about the relative importance of Tasmania's overseas exports bearing in mind that Tasmania's figures are understated (and the remaining states correspondingly inflated) in respect of transshipments not recorded as *overseas* trade for Tasmania.

Value of Overseas Trade: Tasmania and Australia

Particulars		1972-73	1973-74	1974-75	1975-76	1976-77
IMPORTS						
Australia—Total	\$'000	4 120 727	6 085 004	8 083 099	8 240 187	10 410 617
Per head	\$	310.3	451.2	590.2	595.1	744.1
Tasmania—Total	\$'000	45 045	69 277	100 616	76 262	94 622
Per head	\$	114.0	174.0	249.9	187.7	231.3
EXPORTS						
Australia—Total	\$'000	6 213 704	6 914 395	8 672 762	9 600 748	11 646 412
Per head	\$	468.0	512.7	633.3	693.4	832.4
Tasmania—Total	\$'000	218 712	259 745	226 154	250 580	338 657
Per head	\$	553.6	652.5	561.7	616.7	827.8

The relatively low value of overseas imports per head of Tasmania's mean population is due largely to the transshipment of goods in other Australian ports. Since some goods go overseas from Tasmania by transshipment and are therefore *not* recorded as Tasmanian overseas exports, the export comparisons *per head* of Australian and Tasmanian mean populations suggest that the State plays an important role as an earner of export income for Australia.

Interstate Trade by Air

No data are compiled to show state of origin or state of destination for trade by air; most planes carrying commercial freight to and from Tasmania take off from, or land in, Victoria. The following is a summary of Tasmania's air trade for recent years:

Value of Interstate Air Trade
(\$'000)

Particulars	1972-73	1973-74	1974-75	1975-76	1976-77
Imports	21 238	24 760	26 850	27 882	30 909
Exports	30 626	34 566	31 699	36 280	35 160
Total	51 864	59 327	58 550	64 162	66 069

Interstate Trade by Sea

As might be expected with Melbourne being the closest major port to Tasmania, the bulk of the island's interstate trade is transacted with Victoria. The next table shows the value of interstate sea trade with other Australian states. Imports include the value of some goods imported into other states from overseas and transhipped to Tasmania; exports include the value of some goods exported to other states for transshipment overseas.

Value of Interstate Sea Trade
(\$'000)

Australian state or territory of origin or destination	Imports			Exports		
	1974-75	1975-76	1976-77	1974-75	1975-76	1976-77
New South Wales	59 391	80 158	71 526	128 923	150 890	161 279
Victoria	273 228	331 290	386 466	213 858	247 707	282 374
Queensland	(a) 25 962	(a) 35 118	(a) 42 193	14 870	14 076	13 960
South Australia	42 951	55 922	62 402	18 069	24 625	22 603
Western Australia	549	1 009	1 644	4 037	4 057	5 595
Northern Territory	n.p.	n.p.	n.p.	175	36	39
Total	402 081	503 497	564 231	379 933	441 391	485 850

(a) Includes the value of manganese ore imported from the Northern Territory. Details are not available for separate publication.

Sea Trade of Tasmanian Ports

In the following table, the total value of interstate and overseas imports and exports by sea is shown for each port:

Total Value of Sea Trade Classified According to Port
(\$'000)

Port	Imports		Exports		Total sea trade	
	1975-76	1976-77	1975-76	1976-77	1975-76	1976-77
Burnie.....	88 472	83 989	167 099	206 735	255 572	290 724
Devonport.....	108 389	118 702	101 663	107 529	210 052	226 230
Hobart.....	197 579	240 175	224 334	250 528	421 913	490 702
Currie.....	4 789	5 565	12 076	26 970	16 864	32 535
Launceston.....	173 873	206 327	149 739	181 636	323 611	387 963
Stanley.....	6 588	4 010	36 413	50 026	43 000	54 036
Lady Barron.....	69	86	648	1 082	717	1 168
Total.....	579 759	658 853	691 971	824 506	1 271 730	1 483 360

The decline in the proportion of sea trade attributed to Hobart since 1958-59 is related to the increased use of 'sea-road' facilities available through the ports of Devonport, Launceston and Burnie. The vessels involved regularly in the 'sea-road' service to northern and north-western ports are the *Melbourne Trader* and *Empress of Australia*, while Hobart is served by the *Seaway Prince* and *Seaway Princess*. The *Princess of Tasmania* inaugurated this type of service between Devonport and Melbourne in October 1959, the *Seaway Queen* began a 'sea-road' service between Hobart and Melbourne in June 1964, and a Hobart-Sydney service was commenced by the *Seaway King* in September 1964. In July 1975, the new *Seaway Prince* replaced the *Seaway Queen* and in February 1976, the *Seaway Princess*, a sister ship to the *Seaway Prince*, replaced the *Seaway King*.

The *Empress of Australia*, which had provided a regular service since January 1965 with Sydney-Hobart-Sydney as one route and Sydney-Bell Bay-Burnie-Sydney as the other, was withdrawn in April 1972 for refitting prior to replacing the *Princess of Tasmania* on the Bass Strait run. The *Empress of Australia* was replaced immediately by the *Australian Trader* which had served northern ports regularly since mid-1969. However, the *Australian Trader*, which had provided overnight accommodation for passengers, was withdrawn from Tasmanian service from August 1976 due to substantial losses being made on this run and was subsequently sold to the Royal Australian Navy.

In October 1971 another roll-on roll-off type vessel, the *Mary Holyman*, commenced a regular service between South Australia and Tasmania with Port Adelaide-Hobart as one route and Port Adelaide-Burnie as the other. In January 1973 the *Darwin Trader*, a bulk carrier-container vessel, inaugurated a regular service with Darwin-Launceston as one route and Hobart-Darwin, via Melbourne, Sydney and Brisbane as the other. This vessel was withdrawn from the Hobart-Darwin service in October 1975. Another vessel, the new *Bass Trader*, commenced a regular service between Northern Tasmania and Queensland in August 1976. Several other vessels (e.g. *Sydney Trader*, *Brisbane Trader*) provide, as required, irregular sea-road services between the four main Tasmanian ports and other Australian states.

The *Straitsman* operated on a regular Melbourne-Grassy-Stanley service during May and June 1972 and again from October 1973 until 23 March 1974 when she rolled over and sank in the River Yarra. Temporary replacement vessels then maintained the service until October 1975 when the *Straitsman*, following a complete refit, recommenced the service.

In May 1976 a regular direct service between Tasmania and Western Australia was re-introduced by the *Beroona* with Burnie and Fremantle as the ports of call. In June 1977 this service was extended to include Hobart. The vessels *Wambiri*, *Boogalla* and *Nyanda* have also been used on this Tasmania-Western Australia service.

The next table compares the proportion of total sea trade values attributed to each port (using 1958-59 for comparison):

**Total Value of Sea Trade: Port Proportions
(Per Cent)**

Port	1958-59	1972-73	1973-74	1974-75	1975-76	1976-77
Burnie	15.3	20.8	21.2	20.5	20.1	19.6
Devonport	6.8	18.7	18.3	17.2	16.5	15.3
Hobart	50.8	(a) 32.9	32.5	35.3	33.2	33.1
Currie	0.5	0.3	0.9	1.1	1.3	2.2
Launceston	23.5	23.9	24.0	23.1	25.4	26.2
Stanley	0.6	3.2	2.9	2.6	3.4	3.6
Strahan	2.4	(b) -	-	-	-	-
Lady Barron	-	0.2	0.2	0.1	0.1	0.1
Total	100.0	100.0	100.0	100.0	100.0	100.0

(a) Includes Strahan from 1971-72.

(b) Included in Hobart (on 1 October 1970 the port of Strahan came under the control of the Marine Board of Hobart).

Air Trade of Tasmanian Airports

Although Tasmania has a number of airports, only six are used on a regular basis for interstate trade and of these, two accounted for 87 per cent of total air trade in 1976-77. Launceston's airport accounted for 55 per cent of the total value of air trade in 1976-77 while Hobart's airport accounted for a further 33 per cent. The following table shows the value of interstate air trade passing through Tasmanian airports:

**Total Value of Interstate Air Trade Classified According to Airport
(\$'000)**

Airport	Imports		Exports		Total air trade	
	1975-76	1976-77	1975-76	1976-77	1975-76	1976-77
Hobart	13 643	15 422	5 705	6 237	19 348	21 659
Launceston	8 521	9 130	28 662	26 877	37 184	36 008
Devonport	2 230	2 426	394	402	2 624	2 828
Wynyard (a)	2 315	2 566	388	381	2 702	2 947
King Island	861	1 009	946	1 019	1 807	2 028
Flinders Island	311	356	185	244	496	600
Total	27 882	30 909	36 280	35 160	64 162	66 069

(a) Includes Smithton.

Commodities Carried by Air

It will be observed that the value of trade by air is about 4 per cent of the value of total overseas and interstate trade by sea and air combined. In 1976-77 the total value of air trade to and from Tasmania was \$66.1m compared to the total value of sea and air trade of \$1 549.4m. With regard to exports by air (valued at \$35.2m in 1976-77), the major group was 'textiles and yarns' valued at \$32.2m; exports of all foodstuffs (meat, rock lobster, fruit, etc.) accounted for a further \$1.7m. For imports there is a much greater range of commodities involved, the chief group being 'clothing and footwear' valued at \$17.2m in 1976-77.

The annual values of both imports and exports by air have not increased greatly over the past 10 years, which means that the quantities of goods involved have probably declined because of the general increase in prices over the period. A possible explanation is the improvement in sea carriage techniques (roll-on roll-off vessels, container vessels, etc.) and improved shipping schedules.

The following table shows the value of imports to and exports from Tasmania by air for recent years:

**Air Trade: Value of Interstate Imports and Exports
(\$'000)**

Year	Imports	Exports	Year	Imports	Exports
1971-72	20 622	29 374	1974-75	26 850	31 699
1972-73	21 238	30 626	1975-76	27 882	36 280
1973-74	24 760	34 566	1976-77	30 909	35 160

Imports of Principal Commodities

The next table shows the value of the principal commodities imported into Tasmania by sea and air for a four-year period:

**Imports of Principal Commodities by Sea and Air: Values
(\$'000)**

Commodity	1973-74	1974-75	1975-76	1976-77
Beer, wine and spirits	4 400	5 225	5 724	6 825
Aluminium oxide and hydroxide	n.p.	n.p.	n.p.	n.p.
Clothing and accessories	19 704	26 473	30 998	32 209
Cocoa beans and cocoa butter	n.p.	n.p.	n.p.	n.p.
Confectionery	4 082	4 000	4 814	4 924
Footwear	4 408	4 790	6 324	6 558
Machinery—Electrical	14 817	22 886	27 098	27 595
Other	33 296	31 336	39 370	47 325
Metal manufactures	9 134	10 243	12 854	14 736
Metals	20 050	20 552	22 939	22 177
Motor vehicles—New	47 389	65 557	69 735	76 597
Other (a)	28 805	33 823	35 439	36 492
Ores and concentrates	24 764	36 473	43 326	51 174
Paper and paper manufactures	11 215	11 690	12 713	12 417
Petroleum products—Motor spirit	10 653	12 657	20 804	34 803
Fuel oils	12 445	18 402	25 939	37 337
Other	8 263	11 199	17 917	26 202
Pulp for paper-making	12 348	19 042	16 429	15 855
Rubber manufactures	6 574	7 292	7 686	8 931
Sugar, refined	4 909	5 436	5 100	5 267
Textile yarn and fabrics	23 690	20 836	20 683	22 176
Tobacco and cigarettes	13 601	14 730	15 679	16 182
Wheat	5 074	6 588	6 938	8 193
Other (b)	132 222	140 317	159 132	175 787
Total imports	451 843	529 547	607 641	689 762

(a) Mainly tourist and other motor vehicles imported as personal effects.

(b) Includes value of items marked 'n.p.'.

The table that follows shows the quantities of the principal commodities imported and has been compiled, as far as is practicable, to match the preceding table of values.

Imports of Principal Commodities by Sea and Air: Quantities

Commodity	Unit of quantity	1973-74	1974-75	1975-76	1976-77
Alcoholic beverages—					
Ale, beer, stout and cider	'000 l	1 692	1 749	1 529	1 239
Wine	'000 l	2 970	3 236	3 352	3 451
Spirits and liqueurs—Overseas (a)	'000 l al	45	41	86	48
Interstate	'000 l	828	910	879	902
Aluminium oxide and hydroxide	kg	n.p.	n.p.	n.p.	n.p.
Cocoa beans and cocoa butter	kg	n.p.	n.p.	n.p.	n.p.

Imports of Principal Commodities by Sea and Air: Quantities—continued

Commodity	Unit of quantity	1973-74	1974-75	1975-76	1976-77
Confectionery	t	2 897	2 556	2 713	2 695
Iron and steel	t	120 378	115 954	116 458	85 093
Motor vehicles—New	no.	19 740	20 902	19 223	21 744
Other (b)	no.	17 200	18 688	18 919	18 224
Ores and concentrates	t	486 890	443 225	416 217	508 960
Petroleum products—					
Motor spirit	'000 l	357 525	361 523	378 127	392 919
Fuel oils	'000 l	547 938	478 237	505 949	453 585
Pulp for paper-making	t	83 657	94 578	74 134	78 855
Sugar, refined	t	26 623	26 664	23 484	22 888
Tobacco and cigarettes	t	936	1 012	1 050	1 049
Wheat	t	76 092	83 006	74 748	78 456

(a) Overseas imports of spirits and liqueurs are recorded in 'litres alcohol'.

(b) Mainly tourist and other motor vehicles imported as personal effects.

Imports from Principal Overseas Countries

The next table shows the value of imports, by main commodities, from principal overseas countries. In recent years Japan has been Tasmania's principal source of overseas imports. In 1976-77 the value of imports from Japan accounted for 17 per cent of the total value of \$94.6m of imports from overseas countries; the United States of America accounted for 14 per cent and New Zealand, the United Kingdom and Canada, 10 per cent each.

Value of Imports from Principal Overseas Countries
(\$'000)

Commodity	1971-72	1972-73	1973-74	1974-75	1975-76	1976-77
JAPAN						
Chemicals	856	558	879	1 368	1 160	2 469
Commercial vehicles	381	809	775	1 392	2 456	3 454
Machinery	908	1 172	2 266	2 916	2 095	2 048
Passenger motor vehicles	719	1 081	2 141	3 129	2 397	3 129
Textiles	1 569	2 566	3 579	1 902	2 319	2 617
Motor cycles	160	242	500	853	583	753
Other (a)	456	575	2 322	1 371	826	1 251
Total	5 049	7 003	12 462	12 931	11 836	15 721
UNITED STATES OF AMERICA						
Chemicals	199	333	556	1 090	729	1 147
Clays	395	422	396	1 023	685	1 165
Coke of coal	63	45	87	315	148	596
Machinery	895	2 362	2 329	4 182	2 503	2 781
Petroleum coke	1 666	1 073	946	2 535	2 858	3 833
Transport equipment	23	54	626	1 339	258	428
Woodpulp	957	1 070	2 094	2 463	1 372	1 474
Other	457	627	1 896	1 771	1 486	2 207
Total	4 655	5 986	8 930	14 718	10 039	13 631

Trade and Distribution

Value of Imports from Principal Overseas Countries—continued
(\$'000)

Commodity	1971-72	1972-73	1973-74	1974-75	1975-76	1976-77
NEW ZEALAND						
Chemicals	144	200	357	383	81	140
Machinery	189	99	253	428	385	375
Paper and paper board	395	273	1 765	1 883	1 958	1 811
Textiles	r 980	r 538	r 468	r 336	r 422	285
Woodpulp	3 324	4 055	3 801	6 561	6 150	5 349
Other	769	2 567	1 608	1 274	1 186	1 537
Total	5 801	7 732	8 252	10 865	10 182	9 497
UNITED KINGDOM						
Chemicals	633	687	725	735	510	727
Food, beverages and tobacco	178	178	149	441	358	579
Machinery	2 400	1 406	4 004	2 561	3 130	2 371
Metal manufactures	632	503	521	646	611	933
Printed matter	284	288	275	547	789	466
Textiles	r 729	r 827	r 1 006	r 1 101	r 934	1 327
Tyres and tubes	212	187	196	463	249	456
Other (a)	1 810	1 924	3 361	2 220	2 031	2 394
Total	6 878	6 000	10 237	8 714	8 612	9 253
CANADA						
Machinery	105	100	176	120	725	377
Textiles	102	97	118	150	107	140
Woodpulp	3 276	3 666	4 729	5 599	6 993	7 964
Other	295	478	3 843	2 034	306	748
Total	3 778	4 341	8 866	7 903	8 131	9 229

(a) Includes value of items not available for separate publication.

Exports of Principal Commodities

The following table shows the value of principal commodities exported (interstate and overseas) from Tasmania by sea and air:

Exports of Principal Commodities by Sea and Air: Values
(\$'000)

Commodity	1974-75	1975-76	1976-77
Butter (including butter oil)	4 460	7 527	3 851
Cheese	7 922	7 633	12 317
Fertilisers, manufactured	1 899	2 155	59
Fish, crustaceans and molluscs	6 333	4 939	6 622
Fruit—Apples (fresh)	9 885	8 440	5 593
Juices and syrups	1 198	1 065	672
Other	3 138	2 689	3 012
Hides and skins (cattle, calf, horse and sheep)	3 892	4 871	6 658
Hops	1 996	1 447	1 625
Live animals	2 209	1 402	4 034
Machinery	3 581	4 983	4 666
Meat—Beef and veal	9 183	13 648	15 679
Lamb and mutton	1 650	2 504	3 718
Other	1 602	1 238	943
Metal manufactures	7 632	4 599	1 840
Metals, refined—Cadmium	1 985	2 815	2 233
Zinc	74 298	74 926	98 318

Exports of Principal Commodities by Sea and Air: Values—continued
(\$'000)

Commodity	1974-75	1975-76	1976-77
Motor cars and commercial vehicles (a)	32 524	34 854	36 651
Ores and concentrates—Copper	20 088	22 021	26 371
Iron	28 882	32 531	45 025
Lead	11 634	12 169	16 208
Tin	23 583	17 428	35 010
Tungsten	7 053	8 439	22 333
Sulphuric acid	6 947	7 083	7 730
Tallow	1 293	2 065	2 206
Textile yarn, fabrics and made-up articles	31 454	41 656	35 811
Timber—Dressed	8 303	12 511	15 287
Undressed	14 387	13 568	21 796
Vegetables, fresh and preserved	19 297	23 872	31 128
Woodchips	35 212	35 524	n.p.
Wool, greasy	26 640	31 232	33 685
Commodities not available for publication (b)	198 716	244 863	334 950
All other exports	28 910	41 554	23 636
Total	637 786	728 251	859 667

(a) Mainly tourist and other motor vehicles exported as personal effects.

(b) Commodities comprising this item are: aluminium, alumina, beadings and mouldings, paper, hardboard, cement, ferro-manganese, silicon-manganese, confectionery, cocoa and chocolate, food beverages, paper pulp, metal scrap, calcium carbide, titanium oxides, plywood, rutile, zirconium, particle board, asbestos-cement articles, ferro-silicon and for 1976-77, woodchips.

The next table shows the quantities of the principal commodities exported and has been compiled, as far as possible, to match the preceding table of values:

Exports of Principal Commodities by Sea and Air: Quantities

Commodity (a)	Unit of quantity	1974-75	1975-76	1976-77
Butter (including butter oil)	t	5 012	9 720	4 363
Cheese	t	10 386	9 026	14 552
Fertilisers, manufactured	t	23 682	35 694	657
Fish—Abalone	t	1 104	978	872
Rock lobster	t	1 020	524	711
Other	t	1 054	715	885
Fruit—Apples (fresh)	t	55 735	45 705	24 284
Juices and syrups	'000 l	1 832	1 496	989
Other	t	9 851	8 838	8 413
Hides and skins (cattle, calf and sheep)	t	7 014	8 306	7 729
Hops	t	1 408	918	1 625
Live animals—Cattle	no.	16 376	8 612	16 401
Sheep	no.	116 876	93 467	188 753
Meat—Beef and veal	t	12 935	15 324	16 463
Lamb and mutton	t	3 376	3 969	5 116
Pork	t	1 019	301	293
Other	t	1 127	1 289	1 119
Metals, refined—Cadmium	t	323	626	447
Zinc	t	139 253	138 243	162 001
Motor cars and commercial vehicles (b)	no.	17 956	18 553	18 133
Ores and concentrates—Copper	t	81 690	85 530	87 539
Iron	'000 t	2 061	2 025	2 242
Lead	t	41 974	37 311	44 937
Tin	t	13 146	9 340	14 506
Tungsten	t	2 261	2 708	3 057
Timber—Dressed	m ³	60 985	88 880	102 987
Undressed	m ³	152 443	149 560	210 240
Vegetables—Fresh	t	17 035	15 305	12 464
Preserved	t	46 743	57 736	75 234
Woodchips	'000 t	2 031	1 734	n.p.
Wool, greasy	t	15 947	17 435	16 204

(a) Principal commodities not available for publication comprise: aluminium, alumina, hardboard, cement, ferro-manganese, silicon-manganese, confectionery, cocoa and chocolate, food beverages, paper-pulp, metal scrap, calcium carbide, titanium oxides, plywood, rutile, zirconium, particle board, asbestos-cement articles, ferro-silicon and, for 1976-77, woodchips.

(b) Mainly tourist and other motor vehicles exported as personal effects.

Export of Selected Commodities

The following table shows, in summary form, total exports of some important commodities for selected years since 1939-40:

Exports of Selected Commodities by Sea and Air

Commodity	Unit of quantity	1939-40	1949-50	1959-60	1969-70	1976-77
QUANTITY						
Apples and pears, fresh ...	t	74 373	56 911	80 683	109 384	24 847
Butter (including butter oil).....	t	2 816	2 179	7 864	12 611	4 363
Hops.....	t	719	802	1 340	1 368	1 625
Meat, fresh, chilled or frozen.....	t	2 534	957	9 225	17 048	22 951
Ores and concentrates.....	'000 t	137	6	28	2 175	2 396
Timber, dressed and undressed.....	'000 m ³	120	148	178	207	313
Wool, greasy.....	t	5 110	5 228	12 690	16 513	16 204
Zinc, refined.....	t	72 047	81 998	115 680	163 847	162 001
VALUE (\$'000)						
Apples and pears, fresh.....		2 270	4 348	9 490	14 905	5 732
Butter (including butter oil).....		742	1 277	5 390	6 950	3 851
Meat, fresh, chilled or frozen.....		310	312	3 801	11 774	20 281
Ores and concentrates—Copper.....		—	2	40	8 369	26 371
Iron.....		—	—	—	25 286	45 025
Lead.....		595	386	2 956	7 358	16 208
Tin.....		688	723	1 507	16 207	35 010
Textile yarn and fabrics.....		2 674	5 540	17 524	27 784	35 811
Timber, dressed and undressed.....		1 238	2 930	8 952	16 238	37 083
Wool, greasy.....		1 376	6 202	15 254	17 821	33 685
Zinc, refined.....		2 856	9 964	22 922	42 625	98 318

Exports to Principal Overseas Countries

Details for commodities exported to principal overseas countries are given in the next table:

Exports to Principal Overseas Countries

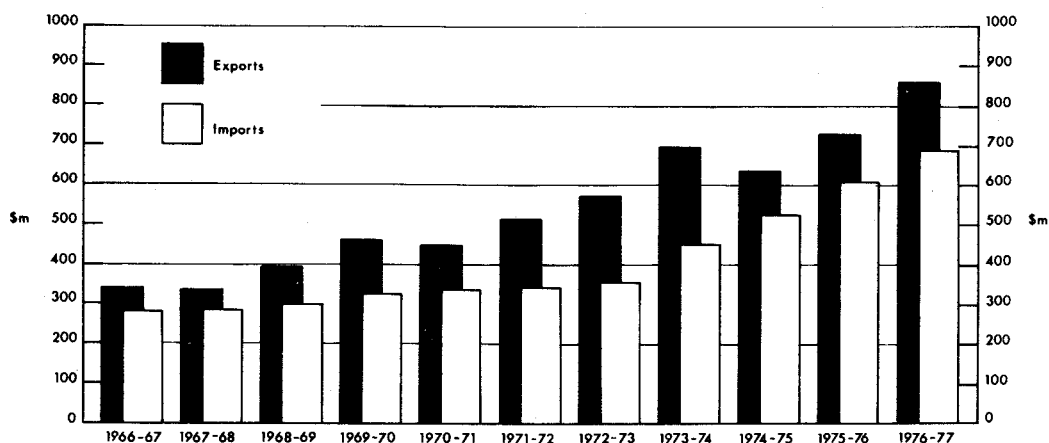
Commodity	Unit of Quantity	Quantity			Value (\$'000)		
		1974-75	1975-76	1976-77	1974-75	1975-76	1976-77
JAPAN							
Abalone	t	606	708	313	1 241	1 832	1 351
Cheese	t	5 098	4 257	7 207	4 194	3 904	6 144
Copper concentrates	t	60 787	71 576	65 772	14 280	16 791	18 120
Feeding Stuff for Animals—							
Meat and bone meal	t	1 962	3 466	2 788	191	310	509
Milk powder	t	—	—	3 780	—	—	672
Hides and skins	t	1 064	3 053	2 189	491	1 561	1 723
Iron concentrates	'000 t	2 051	1 980	2 146	28 783	31 810	42 872
Malt extract	t	2 232	406	775	387	143	227
Meat	t	1 823	4 962	4 525	1 206	4 446	3 573
Milk, dried	t	270	903	883	142	287	240
Peas, frozen	t	—	300	376	—	113	144
Wool, greasy	t	2 043	2 067	2 489	3 428	3 505	5 042
Other (a) .....	..	—	—	—	45 206	45 966	67 573
Total .....	..	—	—	—	99 549	110 670	148 191

Exports to Principal Overseas Countries—continued

Commodity	Unit of Quantity	Quantity			Value (\$'000)		
		1974-75	1975-76	1976-77	1974-75	1975-76	1976-77
UNITED STATES OF AMERICA							
Beef and veal	t	9 219	9 403	7 509	6 341	8 320	8 034
Cadmium	kg	18 800	92 200	48 000	112	377	258
Casein	t	25	59	501	20	56	512
Cheese	t	640	1 539	1 392	543	1 477	1 425
Iron concentrates	t	—	—	95 502	—	—	2 144
Lead concentrates	t	31 372	33 125	36 013	10 954	10 950	12 360
Oil seeds	t	192	592	690	118	579	760
Rock lobster	kg	107 401	33 739	33 589	798	339	373
Wheat gluten	t	645	892	1 448	362	411	988
Wool, greasy	t	40	204	208	63	426	461
Zinc	t	19 537	15 162	22 355	11 631	9 493	15 055
Other	..	—	—	—	2 315	1 912	1 222
Total	..	—	—	—	33 257	34 339	43 593
INDONESIA							
Apples, fresh	t	1 251	1 103	765	242	238	210
Cement, portland	t	2 004	19 011	30 334	71	598	1 125
Zinc	t	8 290	17 152	20 760	5 021	10 143	13 683
Other (a)	..	—	—	—	376	1 132	396
Total	..	—	—	—	5 710	12 112	15 414
MALAYSIA							
Feeding-stuff for animals	t	290	524	1 406	30	560	342
Paper	t	2 774	1 880	3 050	1 270	870	1 064
Tin concentrates	t	2 502	774	2 852	5 521	2 003	10 741
Zinc	t	1 386	1 955	2 177	833	1 182	1 411
Other	..	—	—	—	462	724	831
Total	..	—	—	—	8 115	5 340	14 389
UNITED KINGDOM							
Apples, fresh	t	15 846	14 417	6 064	2 648	2 386	1 647
Hides and skins	t	246	217	140	187	166	178
Hops	t	7	41	219	14	72	189
Meat	t	1 755	1 633	1 054	872	807	632
Onions	t	48	280	1 303	6	55	221
Tin concentrates	t	2 742	1 456	3 282	2 628	1 172	4 237
Wool, greasy	t	685	1 306	1 259	901	2 072	2 286
Zinc	t	15 675	9 595	3 502	5 545	3 397	2 157
Other	..	—	—	—	2 067	900	598
Total	..	—	—	—	14 867	11 026	12 144

(a) Includes item(s) for which details are not available for separate publication.

Total Imports and Exports, Tasmania 1966-67—1976-77



RETAIL TRADE IN TASMANIA

Censuses of Retail Establishments

Historical

Before the Integrated Economic Censuses of 1968-69, retail censuses were undertaken for years ended 30 June 1948, 1949, 1953, 1957 and 1962. Census information collected was extensive. Details are available for statistical divisions, local government areas and special statistical retail areas.

In 1968-69 simultaneous economic censuses for five sectors were undertaken: retailing; manufacturing; mining; wholesaling; and electricity and gas. Results of these censuses appear in the section 'Integrated Economic Censuses' in Chapter 18 together with definitions of concepts and terms used.

Retail Census—1973-74

A retail census was conducted covering trading in 1973-74 but there were no data items collected for purchases, stocks or capital expenditure (as there had been in the 1968-69 census). Certain types of establishment were excluded: bread and milk vendors; footwear repairers; motion picture theatres; and laundries and dry cleaners. The aim was to provide an up-to-date framework for the quarterly retail surveys; therefore the types of establishment included and the financial data collected were limited to this rather narrow purpose. The following table gives results for Tasmania of the 1973-74 retail census. Direct comparisons with the results of previous censuses cannot be made because of changes in the scope of the census.

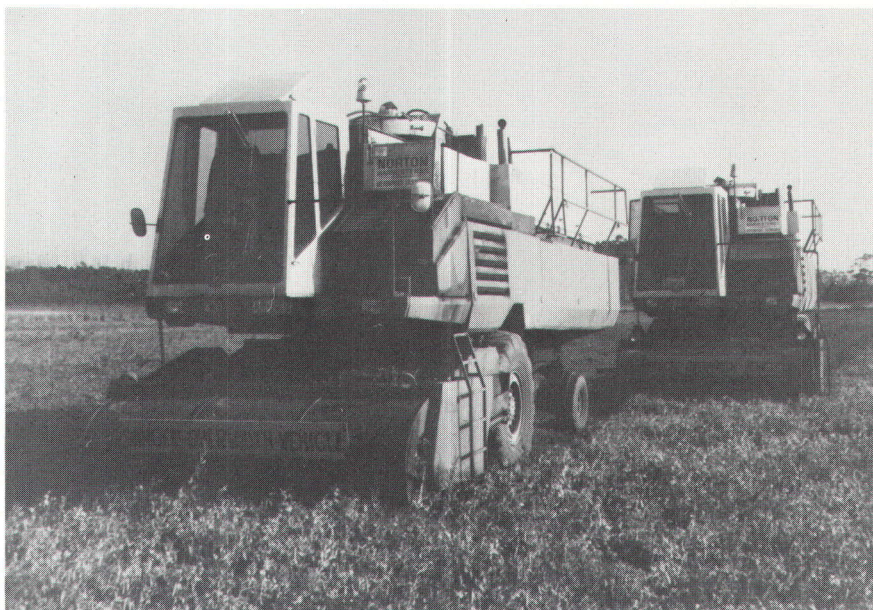
Census of Retail and Selected Service Establishments, 1973-74
Summary of Operations by Industry Group

Industry group	ASIC code (a)	Establish- ments operating at 30 June	Persons employed (b)			Wages and salaries
			Males	Females	Persons	
		no.	no.	no.	no.	\$m
Department, variety and general stores	481	80	677	2 089	2 766	8.8
Food stores	482	1 441	2 660	3 454	6 114	10.7
Clothing, fabric and furniture stores	484	529	935	1 768	2 703	7.7
Household appliances and hardware stores	485	291	819	535	1 354	4.1
Motor vehicle, petrol and tyre retailers	486	955	4 663	1 020	5 683	17.4
Other retailers	487	571	754	1 400	2 154	4.6
Total retail establishments .....	..	3 867	10 508	10 266	20 774	53.2
Restaurants and licensed hotels	921	417	2 315	3 422	5 737	15.8
Licensed clubs	922	163	501	172	673	1.9
Hairdressing and beauty salons	932	256	127	646	773	1.4
Total selected service establishments .....	..	836	2 943	4 240	7 183	19.1
Grand total .....	..	4 703	13 451	14 506	27 957	72.3

(a) Australian Standard Industrial Classification.

(b) At last pay day in June; includes working proprietors and unpaid helpers working at least 15 hours during the week.

A modern pea pod picker



[Edgell Division of Petersville Ltd.]



Filling sliced green beans into cans



The John Williams at Franklin Wharf, Hobart Town, 1869

[By courtesy of the Archives Office of Tasmania]

Census of Retail and Selected Service Establishments, 1973-74
Summary of Operations by Industry Group—continued

Industry group	Retail sales (c)	Whole-sale sales (c)	Other operating revenue (c)	Turnover
	\$m	\$m	\$m	\$m
Department, variety and general stores	56.7	0.9	1.7	59.3
Food stores	137.5	0.7	0.9	139.2
Clothing, fabric and furniture stores	64.5	0.1	0.6	65.1
Household appliances and hardware stores	29.7	0.4	3.0	33.1
Motor vehicle, petrol and tyre retailers	160.1	9.5	21.7	191.4
Other retailers	36.1	0.6	0.4	37.1
Total retail establishments	484.6	12.3	28.3	525.2
Restaurants and licensed hotels	41.9	—	25.0	66.9
Licensed clubs	7.7	—	1.3	9.0
Hairdressing and beauty salons	0.1	—	3.3	3.5
Total selected service establishments	49.7	—	29.6	79.3
Grand total	534.3	12.3	57.9	604.5

(c) Components of turnover in the last column.

In the next table, details are given of establishment, persons employed and value of retail sales by statistical divisions:

Number of Retail and Selected Service Establishments, Persons Employed and Value of Retail Sales by Statistical Division, 1973-74

Statistical division or sub-division	Retail and selected service establishments	Persons employed (a)	Value of retail sales (b)
	no.	no.	\$'000
Hobart	1 741	12 527	237 003
Southern	326	1 099	16 058
Northern—			
Tamar	1 198	6 991	139 779
North Eastern	226	819	10 420
Total	1 424	7 810	150 199
Mersey-Lyell—			
North-Western	1 074	5 812	120 140
Western	138	709	10 900
Total	1 212	6 521	131 040
Total Tasmania	4 703	27 957	534 306
Urban Hobart	1 527	11 663	221 225
Urban Launceston	892	5 900	121 388

(a) At last pay day in June; includes working proprietors and unpaid helpers working at least 15 hours during the week.

(b) These figures refer to the total value of all commodities sold retail by all retail establishments and similar sales by selected service establishments.

Sales by Commodity: Classifications by industry or by region of the sales of commodities shown in the next table are available from the Bureau.

Number of Retail and Selected Service Establishments Reporting Retail Sales, and Value of Sales by Commodity Item, 1973-74

Commodity item	Establishments	Retail sales	Proportion of total sales
	no.	\$'000	per cent
Groceries	1 169	63 775	11.94
Fresh meat	384	26 154	4.90
Confectionery, ice cream, soft drinks, etc.	1 512	14 570	2.73
Other food (a)	1 007	21 255	3.98
Beer, wine and spirits	492	47 823	8.95
Cigarettes and other tobacco products	1 794	15 874	2.97
Clothing and drapery	621	65 754	12.31
Footwear	295	10 338	1.94
Domestic hardware (b)	489	14 397	2.69
Radios, television sets, musical instruments, etc. (c)	224	10 965	2.05
Household electrical appliances (d)	186	13 531	2.53
Furniture (e)	125	11 477	2.15
Floor coverings (f)	120	9 931	1.86
Cosmetics, perfumes, toilet preparations	479	9 629	1.80
Prescription and patent medicines (g)	247	10 532	1.97
Newspapers, books and stationery	516	13 116	2.46
Goods not elsewhere classified (h)	720	15 419	2.89
New motor vehicles, new and used motor cycles, etc. (i)	142	61 445	11.50
Used motor vehicles	172	48 802	9.13
New and used parts and accessories, petrol, oil, etc.	723	49 523	9.27
Total .....	..	534 306	100.00

(a) Includes fresh fruit and vegetables, bread, cakes and pastry, fish (fresh or cooked), chips, hamburgers and cooked chicken.

(b) Includes china, glassware, jewellery, watches and clocks and garden equipment but excludes basic building materials, builders' hardware and supplies such as tools of trade, paint, etc.

(c) Includes radiograms, tape recorders, records, sheet music, etc.

(d) Includes domestic refrigerators and freezers, washing machines, stoves, household heating appliances, bottled liquid petroleum gas, etc.

(e) Includes mattresses, blinds, etc. and installation and repairs.

(f) Includes carpets, lino, etc. and laying of floor coverings.

(g) Includes therapeutic appliances.

(h) Includes photographic equipment and supplies, sporting goods, bicycles, toys, antiques, disposal and secondhand goods, cut flowers, garden seeds, shrubs, travel goods and brief cases, etc.

(i) Includes new and used boats and caravans.

Quarterly Estimates of Value of Retail Sales

Each quarter, returns of retail sales are collected from a sample of all retail businesses recorded in the most recent census of retail establishments. The sample selected represents the field covered by the census. This sample is varied annually to make provision for 'new' establishments opening up, 'old' establishments closing down and 'old' establishments changing type. ('Old', in this context relates to business as recorded at the most recent census of retail establishments.)

Retail sales relate principally to sales to the final consumer of new and used goods for personal and household purposes. The survey is intended primarily as an indicator of such sales.

Retail Sales of Goods, Tasmania

The following table sets out details of estimated value of retail sales, by commodity groups, for recent periods:

Estimated Value of Retail Sales of Goods by Commodity Groups (a)

Commodity group	1976-77		Six months ended December 1977	
	Value	Proportion of total	Value	Proportion of total
Groceries	110.0	17.8	59.3	17.1
Butchers' meat	35.6	5.8	18.4	5.3
Other foods	57.8	9.4	31.9	9.2
Beer, wine and spirits	77.5	12.6	44.5	12.8
Clothing and drapery	101.3	16.4	59.9	17.2
Footwear	15.8	2.6	8.5	2.4
Domestic hardware, china and glassware	24.4	4.0	15.4	4.4
Electrical goods	56.5	9.2	28.8	8.3
Furniture	34.4	5.6	19.9	5.7
Chemists' goods	30.1	4.9	17.5	5.0
Newspapers, books, stationery, etc.	23.3	3.8	15.6	4.5
Other goods (b)	49.6	8.0	27.8	8.0
Total (b)	616.3	100.0	347.5	100.0

(a) Based on sample from the 1973-74 Retail Census.

(b) Excluding motor vehicles, parts, petrol, etc.

Retail Sales of Goods, Australia

The following table gives details of the estimated value of retail sales of goods for recent years and quarters for Australia at current (actual prices paid) and constant (average 1974-75) prices. The constant prices series is derived from the original series by using specially constructed price indexes for the various commodity groups. This eliminates the direct effects of price changes.

Estimated Value of Retail Sales of Goods: Australia (a)
(\$ million)

Year or quarter	Food and drink		Other (b)		Total (b)	
	Current prices (c)	Constant prices (d)	Current prices (c)	Constant prices (d)	Current prices (c)	Constant prices (d)
1975-76	8 662.9	7 621.0	10 382.3	9 147.2	19 045.2	16 768.2
1976-77	9 903.6	7 917.4	11 472.2	9 166.7	21 375.8	17 084.1
1976-77—						
September	2 305.7	1 911.0	2 698.3	2 248.2	5 004.0	4 159.2
December	2 632.0	2 120.2	3 363.1	2 722.6	5 995.1	4 842.8
March	2 431.2	1 926.7	2 543.2	2 005.4	4 974.4	3 932.1
June	2 534.7	1 959.5	2 867.6	2 190.5	5 402.3	4 150.0
1977-78—						
September	2 602.0	1 958.2	2 884.1	2 182.1	5 486.1	4 140.3
December	2 958.8	2 179.7	3 612.0	2 674.7	6 570.8	4 854.4

(a) Excludes Northern Territory and Australian Capital Territory.

(b) Excludes motor vehicles, parts, petrol, etc.

(c) Original prices.

(d) Average 1974-75 prices—see text preceding table.

Household Expenditure

The section 'Household Expenditure Survey' in Chapter 18 includes details relating to household expenditure in Tasmania (dissected by type of payment and weekly household income group) for 1975-76.

Further References

ABS publications produced by the Tasmanian office

Overseas Trade, Tasmania (5409.6) (annual, 1977-78 released 22-9-78, 4pp.).

Retail and Selected Services Establishments, Tasmania (8601.6) (irregular, 1973-74 released 2-10-78, 32pp.).

ABS publications produced by the Canberra office

Overseas Trade, Australia-Exports (Preliminary) (5407.0) (annual, 1976-77 issue released in February, 1978, 91pp.).

Overseas Trade, Australia-Imports (Preliminary) (5408.0) (annual, 1976-77 issue released in February, 1978, 229pp.).

Exports, Australia (5404.0) (monthly, June 1978 issue released 28-9-78, 14pp.).

Imports, Australia (5406.0) (monthly, June 1978 issue released 27-9-78, 23pp.).

Census of Retail Establishments and Selected Service Establishments (Preliminary) (irregular, 1973-74 released 3-7-78, 2pp.).

Chapter 11

TRANSPORT AND COMMUNICATION

PORT AUTHORITIES

Introduction

Tasmania has a number of ports capable of accommodating overseas vessels; they are sited on the Derwent and Huon Rivers in the south (Hobart and Port Huon); in Spring Bay on the east coast; on the River Tamar in the north (Inspection Head, Long Reach and Bell Bay); on the Mersey River (Devonport), in Emu Bay (Burnie) and at Port Latta, all in the north-west. All these ports provide depths of approximately 9 metres or more of water at berths; Port Latta provides a depth of 16 metres nearly one and a half kilometres off-shore.

Interstate and intrastate trade passes through the main ports and operates as well through ports at Strahan, Stanley, Ulverstone, Currie (on King Island) and Lady Barron (on Flinders Island).

This section deals primarily with the authorities which control the harbours but a brief description is given of the main ports.

Port of Hobart

Location

The approach to the Derwent and the Port of Hobart is made through a very wide strait between Cape Queen Elizabeth (Bruny Island) and Cape Raoul (Tasman Peninsula), approximately 50 kilometres south-east of the city. The mouth of the Derwent, five and a half kilometres wide, lies 19 kilometres south-east of the port which is built upstream on the western bank in a U-shaped cove; the opposite bank lies two and a half kilometres away to the east. The shores of the Derwent and the arms of the cove act as natural breakwaters.

Description

The present main port is situated in the Sullivan's Cove area, being U-shaped with 610 metres separating the southern and northern arms. The southern area is devoted to Princes Wharf with berths numbered one to four. Between Numbers 1 and 2 is Princes Intermediate, the bulk grain berth. The centre of the cove contains Elizabeth Street Pier and Kings Pier, while the northern area is made up of Macquarie Berths No. 1, 2 and 3. Turning up river from the outer end of Macquarie Berth No. 3, the area known as Macquarie Point has been developed to provide the port with two additional roll-on roll-off berths and one container/general cargo berth. The two roll-on roll-off berths are operated by the Union Steamship Company's 'Seaway' interstate service, connecting Hobart with Melbourne and Sydney. The third new berth is 224 metres long and is capable of accommodating the largest general cargo carriers in service. Adjacent to these new berths is 8.4 hectares of sealed cargo area, two large all weather cargo sheds, a dual rail spur connecting into the State's main rail system and adequate holding points for refrigerated containers.

The most striking feature of the Port of Hobart is the ease with which large vessels can be brought to berth. Tides present no problem, the maximum rise and fall being 1.37 metres (average approximately 0.61 metres), and dredging of approach channels has never been necessary.

Subsidiary Ports

In addition to the main port in the heart of the city, there are a number of subsidiary outlets serving the south of the State. Port Huon wharf, located on the west bank of the Huon River near Geeveston, is in the centre of the principal orcharding area and used mainly for fruit exports. Also based on the Huon River (at Hospital Bay) is the A.P.M. Ltd private wharf (for export of paper pulp). At the Port of Spring Bay, near Triabunna on the east coast, accommodation has been provided for bulk carriers loading woodchips for Japan. In the Derwent itself, four kilometres upstream from the main port, is a tanker berth at Sells Point where bulk petrol and oil are stored; tankers pass under the 47-metre high navigation span of the Tasman Bridge on their way to Sells Point.

The Sells Point area has been developed as a petroleum products storage area and has replaced the Macquarie Wharf facilities as Hobart's petroleum installation. One and a half kilometres upstream from Sells Point is the Electrolytic Zinc Company Ltd private wharf at Risdon. At Boyer, located nearly 32 kilometres upstream from the main port, is the Australian Newsprint Mills Ltd plant. Newsprint is ferried to the main port by barge.

Administration

The Marine Board of Hobart is the authority controlling the main ports of Hobart, Port Huon and the Port of Spring Bay. When the Marine Board of Strahan ceased to function on 30 September 1970, Parliament extended the responsibilities of the Marine Board of Hobart to cover the control and operation of the Port of Strahan. The Board's jurisdiction covers the west, south and east coasts of Tasmania between the parallel of 41½° south latitude and Cape Portland.

Port of Launceston

Location

The Port of Launceston is situated on the River Tamar, which originates at the confluence of the North Esk and South Esk Rivers at the City of Launceston and flows 60 kilometres to Bass Strait where deep water and broad expanses of river provide a valuable natural harbour. In this area, encompassing Bell Bay, Inspection Head and Long Reach, are located the major activities of the Port of Launceston. A tidal range of between three and 3.6 metres creates strong tidal currents, which by natural scour eliminate the need for any maintenance dredging in the lower reaches of the river.

Because extensive areas of deep water frontage are available, the development of the port is decentralised with the main operations located as follows:

- (i) *Bell Bay*: Wharves include two tanker berths, a general cargo and bulk berth, a passenger berth, roll-on roll-off facilities and a special bulk berth serving Comalco Aluminium Ltd. One roll-on roll-off berth serves Australian National Line vessels and a common-user roll-on roll-off berth is also available. Large modern cold store facilities are also provided. The Bell Bay site is on the eastern shore, some 13 kilometres upstream from the mouth of the Tamar. The Bell Bay and Long Reach areas are linked to the railway system.
- (ii) *Long Reach*: Port facilities have been developed upstream from Bell Bay, the main function being export of woodchips from adjacent plants.
- (iii) *Inspection Head*: Overseas berths are situated on the western bank, opposite Bell Bay, for shipment of fruit, frozen meat and general cargo. Large cool storage and freezer facilities are provided as well as bulk storage and special loading facilities for tallow.
- (iv) *Kings Wharf, Launceston*: Berths for interstate and intrastate trade; facilities also include a graving dock and fitting-out berths for small ship docking and repair.

Description

All berths and facilities now in service in the port have been constructed since about 1950 and are, therefore, of modern standard.

Channel and lighting improvements in the lower reaches have been carried out over recent years, permitting vessels drawing up to 11.1 metres to work the river for 16 kilometres from Bass Strait to the site of the new woodchip berths in Long Reach. The channel

improvement works have been designed to provide for the rapidly growing industrial complex at Bell Bay which is creating an ever increasing demand for large bulk carriers.

Administration

The port is administered by the Port of Launceston Authority whose jurisdiction covers the full length of the River Tamar, together with the northern coastline westward to Badger Head and eastward to Cape Portland.

Port of Devonport

Location

The Port of Devonport is situated on the Mersey River within two kilometres of the coast. The entrance is sheltered by Mersey Bluff on the west and by a retaining wall extending over half a kilometre northward from the eastern shore of the river. The river was always a natural harbour for small craft and its development as a major port by extensive dredging and engineering works has resulted in a secure harbour for large ships.

Description

The main harbour is formed around two turning basins, each 259 metres in diameter with wharves on both banks providing 1 067 lineal metres of berthage.

The western bank contains four overseas and interstate berths and one specialised cattle jetty. These berths are provided with storage sheds, oil pipelines, wheat silos, bulk cement silos and bulk tallow silos, as well as one of the largest and most modern cold storage facilities in the State. Provision has also been made for the handling of bulk commodities and heavy lifts while all berths are connected to the railway network.

Two terminals for roll-on roll-off and container cargo are located on the eastern bank; one is leased to the Australian National Line and the other is a common-user facility. Both are equipped with stern loading ramps and cranes for lift-on lift-off cargo. Extensive vehicle marshalling and cargo assembly areas are provided, with land available for expansion. Approximately 115 000 passengers pass through the No. 1 Terminal each year. In July 1972 the *Empress of Australia* replaced the *Princess of Tasmania* on the passenger run to and from Melbourne. The A.N.L. vessels *Melbourne Trader*, *Sydney Trader*, *Brisbane Trader*, and *Townsville Trader* maintain a regular cargo service from both terminals.

A 30-tonne portal travelling crane at No. 2 Berth is capable of handling all types of cargo units. For the speedy handling of bulk cargoes a 14-tonne grab and 40-tonne capacity hopper are available as auxiliaries to the crane. A 30-tonne portainer crane operates at No. 1 Berth. Further extensions of port facilities will depend on proposed expansion by major industries in the area.

Port of Burnie

Location

The ports of Hobart, Launceston and Devonport all lie within the shelter of rivers but the Port of Burnie, on Emu Bay, was built out into the open sea in the lee of Blackmans Point. Protection from the potentially rough seas of Bass Strait is afforded by two large breakwaters. Burnie is a deep-water port with no tidal restrictions, except occasionally for the larger vessels, and is virtually fog-free. It is in operation 24 hours every day, and vessels can be at full speed 20 minutes after departure. All wharves are connected to the State railway system.

Description

The shelter necessary for all-weather use of the port is provided by a 380-metre breakwater extending from Blackmans Point in a south-easterly direction. The wharves are thus protected by the point and by the breakwater from swells coming in from the west or north, the two quarters from which heavy seas are feared. Ocean Wharf is constructed immediately in the lee of the breakwater, the two structures appearing as one. Other berths are provided by piers parallel to the breakwater but lying further south.

An island breakwater sited north-east from the end of Ocean Wharf and consisting of concrete caissons 488 metres long, is orientated south-east and is calculated to give ample protection for up to 610 metres of berthage south of existing piers. An interesting feature is

the use of the lee of the island breakwater for a tanker berth for both petroleum and sulphuric acid, the fuel being pumped to the land along a submarine pipe, and the sulphuric acid pumped to the berth over a bridge spanning the gap between the two breakwaters.

A modern passenger and roll-on roll-off cargo terminal handles 640 000 tonnes of general cargo shipped annually by Australian National Line vessels servicing Melbourne, Sydney and Queensland ports. The terminal is equipped with a 40-tonne portal crane plus a 25-tonne auxiliary hoist. A further roll-on roll-off berth at North McGaw pier handles general cargo for the Adelaide service.

Burnie has six other berths in regular use. Ocean Wharf, North McGaw and North Jones Pier (old) are conventional berths used for general cargo and the handling of L.A.S.H. barges. South McGaw Pier is used primarily for inward bulk cargoes such as ilmenite and clay and is equipped with one 12-tonne and one 14-tonne crane. New Jones Pier North is a bulk cargo berth, capable of handling vessels up to 240 metres in length and 10.0 metres draft. It is traversed by a conveyor loader, owned by the Emu Bay Railway Company Ltd, with a loading rate of 1 270 tonnes per hour. It handles zinc, lead and copper concentrates from the west coast mines, and calcines from the Wivenhoe Acid Plant. New Jones Pier South is the port's major general cargo berth, used by quarter ramp R.O.R.O. vessels, L.A.S.H. vessels of up to 250 metres length and 9.8 metres draft, and cellular container vessels. It has two large transit sheds, incorporating a cool store. Adjacent to this berth is a container compound with a capacity of 250 standard 'T.E.' units of which 96 may be reefer. There is additional storage area close by for a further 250 units, and also a bulk tallow installation servicing both North and South berths.

Circular Head (Port Latta)

A deep-water offshore terminal, capable of accommodating bulk ore carriers, has been constructed at Port Latta for the export of iron ore pellets to Japan. The loading facility consists of a 1.2 metre wide conveyor belt which carries pellets to two swivel loaders located 1.6 kilometres offshore. Vessels moor in 15.8 metres of water to take on pellets, the system having a discharge capacity of about 3 050 tonnes per hour.

Constitution of Port Authorities

Election of Wardens

The present system of choosing port authority wardens is summarised in the following table:

Port Authorities: Election of Wardens

Authority	Number of wardens	System of election of wardens
Hobart Marine Board	9	Special electorate of ship-owners, importers and exporters
Port of Launceston Authority	5	Electors of Launceston, Beaconsfield and George Town as for local government elections
Burnie Marine Board	9	} Municipal electors within proclaimed areas
Devonport Marine Board	11	
Circular Head Marine Board	7	
King Island Marine Board	5	} Municipal electors
Flinders Island Marine Board	3	

Boards of Hobart and Launceston

The wardens of the Hobart Marine Board are elected by a special electorate of ship-owners, importers and exporters. The number of votes that each importer and exporter may exercise is proportional to the value of goods he imports or exports, while ship-owners' voting rights are proportional to the tonnage of their vessels. Three wardens retire each year; the Master Warden is elected by Board members.

In the case of the Port of Launceston Authority, marine board electors are those qualified to vote at elections for aldermen of the City of Launceston or for councillors of the municipalities of Beaconsfield and George Town.

Navigation and Survey Authority of Tasmania

The Authority was constituted in 1963 to implement sections of the *Marine Act 1921* relating to the safety of life and property at sea. Member marine boards contribute equally to the costs of running the Authority; the income is derived from survey and service fees.

Finances of Port Authorities

The following table gives details of revenue and expenditure for each port authority in 1976-77:

Port Authorities
Receipts and Expenditure: All Funds, 1976-77
(\$'000)

Particulars	Authority							Total
	Hobart	Launceston	Devonport	Burnie	Circular Head	King Island	Flinders Island	
REVENUE FUNDS								
Receipts—								
Wharfage charges	1 726	2 205	1 366	1 648	95	91	31	7 162
Other service charges . .	1 310	2 029	610	539	85	9	5	4 587
Plant hire	806	859	189	426	17	4	—	2 301
Government grants . .	—	—	—	—	—	—	—	—
Other (a)	134	595	100	148	2	9	1	989
Total	3 976	5 688	2 265	2 761	199	113	37	15 039
Payments (b)—								
Administration	564	702	270	408	17	38	1	2 000
Debt charges—								
Interest	717	661	588	730	79	6	11	2 792
Redemption and sinking fund contributions	638	543	347	362	39	6	4	1 939
Works and services	1 820	2 312	963	788	50	61	28	6 022
Other	608	841	54	88	10	17	5	1 623
Total	4 347	5 059	2 222	2 376	195	128	49	14 376
LOAN FUNDS								
Receipts, loan raisings, etc.	2 250	1 018	300	570	30	—	—	4 168
Payments (c)	2 389	488	285	671	29	—	—	3 862

(a) Includes interest receipts, sundry licences, fines and discounts received.

(b) Excludes amounts applied from reserves for capital purposes.

(c) Includes amounts applied from reserves for capital purposes.

The principal sources of revenue of the port authorities are shipping tonnage rates and import and export wharfage rates; other sources are charges for pilotage services and the hiring of equipment. Expenditure is summarised under the heading 'works and services' which includes the provision of ordinary port services (e.g. pilotage, tug assistance, etc.), the maintenance of the port (e.g. dredging, etc.) and the improvement of the port (e.g. new wharves, new berths, etc.). To raise the additional funds required to finance port improvements, the authorities borrow money subject to State Treasury approval, the Treasury acting on behalf of the Australian Loan Council.

The next table summarises the transactions of all port authorities for recent years:

Port Authorities
Receipts and Expenditure: Summary
(\$'000)

Particulars	1972-73	1973-74	1974-75	1975-76	1976-77
REVENUE FUNDS					
Receipts—					
Wharfage charges	4 419	4 830	5 455	5 865	7 162
Other service charges	2 380	2 602	4 580	4 771	4 587
Plant hire	1 481	1 562	1 686	1 903	2 301
Government grants	107	48	87	27	—
Other (a)	620	1 117	627	588	989
Total	9 007	10 159	12 435	13 154	15 039
Payments (b)—					
Administration	911	1 146	1 664	1 800	2 000
Debt charges—					
Interest	2 021	1 961	2 194	2 712	2 792
Redemption and sinking fund contribu- tions	1 202	1 401	1 515	1 717	1 939
Works and services	2 761	3 785	5 031	6 162	6 022
Other	472	1 017	910	1 217	1 623
Total	7 367	9 310	11 314	13 608	14 376
LOAN FUNDS					
Receipts—					
Loan raisings	3 455	3 061	2 930	3 835	3 875
Other	2	6	285	199	293
Total	3 457	3 067	3 215	4 034	4 168
Payments (c)	4 805	3 150	4 693	5 700	3 862

(a) Includes interest receipts, sundry licences, fines and discounts received.

(b) Excludes amounts applied from reserves for capital purposes.

(c) Includes amounts applied from reserves for capital purposes.

The following table gives the loan debts of port authorities at the end of each financial year for recent years:

Port Authorities
Loan Debt of Principal Authorities at End of Year
(\$'000)

Authority	1972-73	1973-74	1974-75	1975-76	1976-77
Hobart	6 627	8 399	9 721	11 256	12 819
Launceston	9 196	9 219	9 412	9 487	9 803
Devonport	7 160	7 374	7 589	8 290	8 262
Burnie	12 722	12 377	12 083	11 974	12 205
Other	1 268	1 287	1 328	1 368	(a) 1 339
Total	36 973	38 656	40 133	42 375	44 428

(a) Comprised: Circular Head, \$1 077 000; Flinders Island, \$176 000; King Island, \$86 000.

The next table summarises annual borrowings, aggregate debt and the provision for loan redemption for recent years:

Port Authorities
Loan Raisings, Loan Debt and Provisions for Redemption
(\$'000)

Particulars	1971-72	1972-73	1973-74	1974-75	1975-76	1976-77
Loan raisings during year (a).....	4 590	3 455	3 061	2 930	3 835	3 875
Loan debt at 30 June.....	34 648	36 973	38 656	40 133	42 375	44 428
Provisions for loan redemption at 30 June (b).....	999	1 151	1 315	1 507	1 622	1 733

(a) No loans were raised from the State Government during the period covered by the table.

(b) Balance of sinking funds and loan redemption provision accounts at end of year.

SHIPPING AT TASMANIAN PORTS

System of Record

The shipping statistics contained in this section were compiled on a new basis from 1 July 1966 and are not fully comparable with statistics published for previous periods. Prior to this date shipping statistics were compiled from details assembled and supplied by the Department of Customs and Excise and by State port authorities. Since 1966-67 Tasmanian shipping statistics have been compiled from details submitted by shipping companies or their representatives, through the Australian Bureau of Customs, for each arrival and each departure of a vessel. Not all vessels which arrived at, and departed from, ports in Tasmania are included in the new series of shipping statistics; the following are now excluded:

- (i) naval vessels;
- (ii) yachts and other craft used for pleasure;
- (iii) foreign fishing vessels that neither load nor discharge cargo;
- (iv) Australian-registered fishing vessels operating from Tasmanian ports;
- (v) geographical, seismic and oceanographic survey vessels;
- (vi) offshore oil drilling rigs and vessels servicing them; and
- (vii) vessels of 200 registered net tons and under.

Movements of Vessels

The inward and outward movements of vessels using Tasmanian ports were classified according to type of voyage and not according to the type of vessel prior to 1969-70. Each movement of a vessel was allocated to one of the following:

- (i) overseas direct;
- (ii) overseas via other state;
- (iii) interstate direct;
- (iv) overseas via port in Tasmania;
- (v) interstate via port in Tasmania; and
- (vi) intrastate.

Addition of the first three classifications (overseas and interstate movements) gives an unduplicated total for Tasmania. The inclusion of the other three classifications (intrastate or coastal movements) must be taken into account to reflect the volume of shipping arriving at, or departing from, individual ports in Tasmania.

However, in 1969-70, it was decided that classification by type of voyage alone was unsatisfactory in two particular categories, namely:

- (ii) overseas via other state; and
- (iii) interstate direct.

While vessels confining their operations to Australian waters could never be associated with category (ii), it was nevertheless possible for vessels engaged in overseas voyages to undertake movements classified under category (iii). For example, a ship bound for the U.K. could be sailing Sydney-Hobart-Melbourne-London. The arrival in Hobart under the pre-1969-70 classification, could be called 'interstate direct' as would the arrival in Melbourne.

For 1969-70 and following years, the classification has been varied so that categories (ii) and (iii) are based on the type of vessel, not on the type of movement. Thus, in terms of the previous example, the U.K.-bound ship's arrival both in Hobart and Melbourne would be classified 'overseas via other state', and not 'interstate direct'.

Tonnage of Vessels

Statistics of vessels are compiled in terms of registered net tonnage. This is an international unit of measurement of a vessel's carrying capacity. (There is no recognised equivalent of net tonnage in the metric system.) Net tonnage is expressed in units of 100 cubic feet (2.8 cubic metres) (i.e. 100 cubic feet equals 1 net ton) and it represents the volume of enclosed space which can be utilised for cargo or passengers.

Overseas and Interstate Shipping

Vessels Entered Tasmanian Ports

The classification 'overseas' in the following table is now much more meaningful since, from 1969-70, the category 'interstate direct' is not used to describe movements of ships engaged in overseas travel voyaging from one Australian state to another; the category now used is 'overseas via other state'. The details are also restricted to entries classified as overseas and interstate movements and in each case the figures are lower than those shown in a later table which includes intrastate movements.

Vessels Entered Ports in Tasmania (a), 1976-77

Port of entry	Overseas				Interstate direct		Total vessels entered	
	Direct		Via other state					
	No.	Net tons ('000)	No.	Net tons ('000)	No.	Net tons ('000)	No.	Net tons ('000)
Hobart	50	501	209	619	106	346	365	1 465
Burnie	15	47	63	591	214	688	292	1 326
Currie	—	—	—	—	26	5	26	5
Devonport	5	11	15	66	367	1 100	387	1 177
Lady Barron	—	—	—	—	—	—	—	—
Launceston	56	1 280	61	224	284	1 043	401	2 547
Stanley	31	667	3	35	87	35	121	737
Total	157	2 506	351	1 535	1 084	3 218	1 592	7 258

(a) Excludes intrastate shipping.

The next table gives a six-year summary:

Shipping: Overseas and Interstate (a), Summary
Vessels Entered Ports in Tasmania

Year	Overseas				Interstate direct		Total vessels entered	
	Direct		Via other state					
	No.	Net tons ('000)	No.	Net tons ('000)	No.	Net tons ('000)	No.	Net tons ('000)
1971-72	117	1 209	267	1 443	1 370	3 285	1 754	5 937
1972-73	172	2 156	308	1 531	1 308	3 552	1 788	7 239
1973-74	173	2 703	238	1 435	1 220	3 085	1 631	7 223
1974-75	190	2 669	260	1 224	1 161	2 928	1 611	6 820
1975-76	163	2 457	340	1 373	1 033	2 903	1 536	6 733
1976-77	157	2 506	351	1 535	1 084	3 218	1 592	7 258

(a) Excludes intrastate shipping.

The following table has been compiled to show the country of registration of vessels entering all ports in Tasmania. The number of vessels and net tonnage figures shown in this

table cannot be added to arrive at a State total as some vessels may have called at two or more ports within the State during the same voyage and are therefore subject to double, triple, etc., counting.

Country of Registration of Vessels Entered Tasmanian Ports: Overseas, Interstate and Intrastate

Country of registration	Vessels entered Tasmanian ports					
	1974-75		1975-76		1976-77	
	Number	Net tons	Number	Net tons	Number	Net tons
Algeria	—	—	—	—	1	11 862
Argentina	—	—	1	6 151	—	—
Australia	1 264	3 291 093	1 209	3 607 816	1 274	3 858 878
Belgium-Luxembourg	2	5 304	2	5 282	—	—
Bermuda	—	—	—	—	1	24 041
Brazil	—	—	1	2 705	2	12 175
Canada	—	—	—	—	1	12 205
China—Taiwan Prov. only	—	—	—	—	1	12 091
Cyprus	—	—	—	—	1	1 939
Denmark	11	63 267	6	25 412	7	24 837
Finland	—	—	—	—	1	10 468
Germany, Fed. Repub. of	11	33 855	9	23 432	8	59 305
Greece	19	211 169	13	191 014	20	172 170
Hong Kong	—	—	1	13 977	2	14 610
India	8	36 705	4	22 641	9	69 447
Indonesia	2	4 882	1	2 441	—	—
Israel	1	3 103	2	7 915	—	—
Italy	8	59 128	2	25 178	—	—
Japan	58	1 001 883	66	990 283	76	1 211 083
Korea, Republic of	1	7 257	—	—	—	—
Liberia	49	734 963	49	820 733	42	647 512
Maldives, Republic of	—	—	3	3 251	—	—
Morocco	1	6 077	—	—	—	—
Nauru	4	39 484	—	—	—	—
Netherlands	54	176 976	17	79 576	16	70 506
New Zealand	14	27 661	13	24 882	14	25 565
Norway	19	139 391	17	205 680	14	157 257
Panama	27	493 598	35	401 133	45	612 876
Papua New Guinea	—	—	—	—	1	360
Poland	9	39 182	11	47 653	8	37 317
Singapore	22	61 466	24	63 855	14	47 223
Spain	1	11 348	—	—	—	—
Sweden	9	53 662	9	52 453	9	83 268
Tonga	9	4 380	19	7 733	20	8 696
United Kingdom	261	736 854	224	616 481	157	518 099
United States of America	26	470 678	24	426 472	19	332 942
U.S.S.R.	15	48 473	15	55 908	9	21 559
Yugoslavia	3	12 972	4	23 172	4	22 590

The next table shows the number and net tonnage of vessels which entered individual Tasmanian ports during 1976-77. The names of ports in this table refer to the cities or towns in which the controlling port authorities are located:

- (i) 'Hobart' includes Port Huon, Port of Spring Bay and Strahan;
- (ii) 'Launceston' includes Bell Bay, Long Reach and Inspection Head;
- (iii) 'Devonport' includes Ulverstone;
- (iv) 'Stanley' includes Port Latta;
- (v) 'Currie' includes Naracoopa and Grassy; and
- (vi) 'Lady Barron' includes Whitemark.

A State total of number of vessels entered and their net tonnage cannot be obtained from the next table by adding the port totals since vessels falling within the categories 'overseas via other Tasmanian port', 'interstate via other Tasmanian port' and 'intrastate' will be counted at each port of entry as a 'vessel entered'.

Shipping: Overseas, Interstate and Intrastate Vessels Entered Tasmanian Ports, 1976-77

Port (a) of entry and type of service (b)	Vessels entered					
	With cargo		In ballast		Total	
	Number	Net tons	Number	Net tons	Number	Net tons
Hobart—						
Overseas direct	27	156 912	23	343 600	50	500 512
Overseas via other state	188	534 580	21	83 944	209	618 524
Overseas via other Tasmanian port ..	14	87 239	4	12 848	18	100 087
Interstate direct	80	274 775	26	71 336	106	346 111
Interstate via other Tasmanian port ..	1	11 178	—	—	1	11 178
Intrastate	11	59 884	1	4 518	12	64 402
Total Hobart	321	1 124 568	75	516 246	396	1 640 814
Burnie—						
Overseas direct	12	35 096	3	12 105	15	47 201
Overseas via other state	58	565 950	5	24 837	63	590 787
Overseas via other Tasmanian port ..	13	101 611	1	6 013	14	107 624
Interstate direct	165	577 835	49	110 519	214	688 354
Interstate via other Tasmanian port ..	42	164 833	—	—	42	164 833
Intrastate	7	39 552	11	49 568	18	89 120
Total Burnie	297	1 484 877	69	203 042	366	1 687 919
Devonport—						
Overseas direct	2	5 423	3	5 317	5	10 740
Overseas via other state	8	46 071	7	20 270	15	66 341
Overseas via other Tasmanian port ..	—	—	1	2 953	1	2 953
Interstate direct	301	1 010 425	66	89 102	367	1 099 527
Interstate via other Tasmanian port ..	15	122 503	—	—	15	122 503
Intrastate	2	9 766	—	—	2	9 766
Total Devonport	328	1 194 188	77	117 642	405	1 311 830
Launceston—						
Overseas direct	8	85 206	48	1 194 759	56	1 279 965
Overseas via other state	56	210 512	5	13 420	61	223 932
Overseas via other Tasmanian port ..	5	25 079	—	—	5	25 079
Interstate direct	283	1 037 696	1	5 389	284	1 043 085
Interstate via other Tasmanian port ..	6	51 598	—	—	6	51 598
Intrastate	9	27 033	—	—	9	27 033
Total Launceston	367	1 437 124	54	1 213 568	421	2 650 692
Stanley—						
Overseas direct	1	3 265	30	663 990	31	667 255
Overseas via other state	3	34 945	—	—	3	34 945
Overseas via other Tasmanian port ..	1	11 395	—	—	1	11 395
Interstate direct	87	35 293	—	—	87	35 293
Interstate via other Tasmanian port ..	14	13 869	—	—	14	13 869
Intrastate	1	207	2	4 678	3	4 885
Total Stanley	107	98 974	32	668 668	139	767 642
Currie—						
Interstate direct	25	5 175	1	207	26	5 382
Interstate via other Tasmanian port ..	7	1 449	—	—	7	1 449
Intrastate	8	12 627	2	414	10	13 041
Total Currie	40	19 251	3	621	43	19 872
Lady Barron—						
Overseas via other Tasmanian port ..	2	968	—	—	2	968
Intrastate	4	1 144	—	—	4	1 144
Total Lady Barron	6	2 112	—	—	6	2 112

(a) See introduction to this table.

(b) Type of service is defined under 'Movements of Vessels' at the beginning of this section.

The following table shows, in summary form, the number and net tonnage of vessels which entered Tasmanian ports during the last three years, by port:

Shipping: Overseas, Interstate and Intrastate Vessels Entered Tasmanian Ports

Port (a) of entry	1974-75		1975-76		1976-77	
	Number	Net tons	Number	Net tons	Number	Net tons
Hobart	524	1 997 946	463	2 051 107	396	1 640 814
Burnie	344	1 397 747	366	1 568 520	366	1 687 919
Devonport	422	1 246 813	361	1 143 540	405	1 311 830
Launceston	413	2 313 629	386	2 210 714	421	2 650 692
Stanley	95	760 939	141	739 755	139	767 642
Currie	78	48 329	57	37 535	43	19 872
Lady Barron	32	9 408	7	2 058	6	2 112

(a) See explanation in introduction to previous table.

Cargo Handled at Tasmanian Ports

In the next table, details are given of the cargo handled at each port in Tasmania. The classifications 'overseas' and 'interstate' relate either to the origin or destination of the cargo.

Cargo handled at ports is recorded either in terms of units of weight or units of volume, depending on the basis on which freight is charged. In these statistics separate details are shown in tonnes for cargo that was recorded in units of weight, and in cubic metres for cargo that was recorded in units of volume.

Cargo Discharged and Shipped (a)
(Individual Tasmanian Ports, 1976-77)

Port	Overseas		Interstate		Total	
	Tonnes	Cubic metres	Tonnes	Cubic metres	Tonnes	Cubic metres

CARGO DISCHARGED

Hobart	122 657	11 709	661 054	229 623	783 711	241 332
Burnie	62 627	2 840	230 474	289 505	293 101	292 345
Currie	—	—	221	12 157	221	12 157
Devonport	16 210	—	154 679	628 430	170 889	628 430
Lady Barron	—	—	—	—	—	—
Launceston	100 484	8 107	713 659	537 658	814 143	545 765
Stanley	36 761	—	17 215	45 856	53 976	45 856
Total	338 739	22 656	1 777 302	1 743 229	2 116 041	1 765 885

CARGO SHIPPED

Hobart	446 833	—	438 716	197 531	885 549	197 531
Burnie	168 166	36	363 468	296 203	531 634	296 239
Currie	—	—	3 968	18 520	3 968	18 520
Devonport	34 078	10 500	220 839	599 690	254 917	610 190
Lady Barron	—	—	—	—	—	—
Launceston	1 602 700	7 802	150 711	371 279	1 753 411	379 081
Stanley	2 111 706	—	13 942	41 551	2 125 648	41 551
Total	4 363 483	18 338	1 191 644	1 524 774	5 555 127	1 543 112

(a) Cargo statistics are compiled in terms of either weight or volume units of measurement depending upon the details originally reported. It is therefore *not* possible to provide statistics for total cargo using a single unit of measurement.

The following table gives a summary of overseas and interstate cargo discharged and shipped at Tasmanian ports for recent years:

Transport and Communication

Cargo Discharged and Shipped, All Tasmanian Ports (a)

Year	Overseas		Interstate		Total	
	Tonnes weight	Cubic metres	Tonnes weight	Cubic metres	Tonnes weight	Cubic metres
DISCHARGED						
1971-72	375 197	17 852	1 825 406	1 350 451	2 200 603	1 368 303
1972-73	516 891	18 883	1 684 286	1 438 171	2 201 177	1 457 054
1973-74	508 988	13 690	1 574 158	1 520 697	2 083 146	1 534 387
1974-75	483 644	33 867	1 666 193	1 592 071	2 149 837	1 625 938
1975-76	281 036	16 724	1 721 764	1 643 943	2 002 800	1 660 667
1976-77	338 739	22 656	1 777 302	1 743 229	2 116 041	1 765 885
SHIPPED						
1971-72	2 919 672	184 107	1 188 696	1 134 175	4 108 368	1 318 282
1972-73	4 417 232	37 232	1 237 236	1 181 601	5 654 468	1 218 833
1973-74	4 891 948	67 779	1 283 131	1 316 286	6 175 079	1 384 065
1974-75	4 309 155	87 523	1 122 309	1 386 133	5 431 464	1 473 656
1975-76	3 969 001	26 871	1 167 523	1 413 021	5 136 524	1 439 892
1976-77	4 363 483	18 338	1 191 644	1 524 774	5 555 127	1 543 112

(a) Statistics for total cargo using a single unit of measurement are not available.

TRANSPORT COMMISSION

Functions of the Commission

The main functions of the Transport Commission are as follows:

- (i) administration of the *Traffic Act* and regulations concerning traffic control and facilities;
- (ii) traffic engineering associated with the control of traffic;
- (iii) registration and taxation of motor vehicles;
- (iv) regulation and licensing of commercial goods vehicles;
- (v) regulation and licensing of taxi and hire cars;
- (vi) regulation and licensing of privately operated coach and omnibus services;
- (vii) testing and licensing of drivers of motor vehicles;
- (viii) operation of a State-owned shipping service between Stanley/King Island/Melbourne;
- (ix) operation of the Bruny Island ferry service;
- (x) administration of aerodromes under the control of the State Government; and
- (xi) operation of an engineering workshop at Launceston (known as the 'Precision Tool Annexe'; new machines for this workshop have recently been obtained from Japan).

In brief, the Transport Commission emerges as a business undertaking, an administrative body and a taxing authority.

Control of Commission

The Commission, by section 6 (2) of the *Transport Act* 1938, is absolutely free from political control except that the Minister for Transport may, under Section 33, appeal to the Governor if dissatisfied with decisions of the Commission. Section 34 allows the Governor, as a form of assistance to industry in certain cases, to direct the Commission to reduce freight charges but, to the extent that such direction causes a revenue loss, the Treasurer is obliged to reimburse the Commission; the formula for reimbursement requires either acceptance of the Commission's original charges as the economic cost of the service or substitution of the Auditor-General's calculation of the economic cost, should the level of the Commission's original charges be considered uneconomic by the Auditor-General.

Commission's Financial Operations

The revenue of the Commission comes from two main sources: (i) own business undertakings—shipping services and an engineering plant ('Precision Tool Annexe'); and (ii) grants from Consolidated Revenue.

The financial transactions of the Commission are summarised in the tables that follow. For simplicity of presentation the transactions are arranged in two sets of accounts, firstly Trading and Profit and Loss and secondly Taxation, Licensing, etc. It should be noted that the net loss in the trading and profit and loss account for any year becomes a charge on Consolidated Revenue in the following year; also that the proceeds from motor taxation, registration, licensing, etc. are passed to Consolidated Revenue, the Commission being reimbursed the cost of collecting such revenues and the costs and expenses incurred in connection with the provision and maintenance of facilities for the control of motor traffic.

Transport Commission: Trading and Profit and Loss Account
(\$'000)

Particulars	1973-74	1974-75	1975-76	1976-77
REVENUE				
Railways (a)	7 896	8 698	—	—
Coastal shipping	1 262	1 271	1 415	2 068
Bruny Island ferry	73	72	81	102
Trans-Derwent ferry	—	236	501	594
Tool annexe	360	554	720	841
Other revenue	240	295	399	513
Net loss (b)	12 129	18 187	4 537	3 919
Total	21 960	29 313	7 654	8 037
EXPENDITURE				
Railways (a)	18 484	23 652	—	—
Coastal shipping	2 119	3 661	4 293	3 889
Bruny Island ferry	169	200	346	403
Trans-Derwent ferry	—	218	1 030	1 102
Tool annexe	409	558	742	842
General expenditure	778	1 025	1 243	1 801
Total	21 960	29 313	7 654	8 037

(a) State railway system controlled by Transport Commission up to 30 June 1975.

(b) To be charged against Consolidated Revenue in the following year.

The remaining transactions can be summarised as follows (road safety accounts are excluded):

Transport Commission: Motor Taxation Collection, Licensing, etc.
(\$'000)

Particulars	1973-74	1974-75	1975-76	1976-77
REVENUE				
Motor tax	5 941	6 379	8 371	10 324
Public vehicle licensing, fees, etc.	459	452	623	917
Registration, licences, etc.	2 234	2 346	3 358	4 158
Refunds of stamp duty	—1	—3	—4	—4
Stamp duty on vehicle registrations	613	1 873	2 797	3 429
Transfers from Consolidated Revenue—				
Road transport administration	990	1 170	1 491	1 741
Traffic engineering section	529	595	692	879
Total	r 10 766	r 12 812	r 17 328	21 444

Transport Commission: Motor Taxation Collection, Licensing, etc.—continued
(\$'000)

Particulars	1973-74	1974-75	1975-76	1976-77
EXPENDITURE—continued				
Profit and loss account (transfers) (a)	88	95	104	101
Paid to Consolidated Revenue	9 159	10 952	15 041	18 723
Administration, traffic control, etc.	r 1 509	r 1 766	r 2 176	2 623
Total	r 10 756	r 12 813	r 17 321	21 447

(a) Receipts from public vehicle licensing paid into profit and loss account.

Annual Loss

In 1968-69 and earlier years the Commission received two grants from Consolidated Revenue: (i) reimbursement of the previous year's loss; and (ii) a grant equal to State Land Tax collections. From 1969-70, the loss incurred by the Commission for the previous year has been reimbursed by a single grant from Consolidated Revenue (\$3 918 610, the loss for 1976-77 reimbursed during 1977-78). The accounts reveal that the Commission's net loss occurred principally in respect of the Coastal Shipping Services.

Transport Commission Shipping Services

The Transport Commission operates a coastal shipping service between King Island, Stanley and Melbourne and a vehicular ferry service to Bruny Island. During 1976-77 the coastal service was operated by the *Straitsman*. In that year the shipping services carried 21 642 sheep, 17 407 cattle and 157 679 tonnes of general cargo. A total of 314 voyages provided essential services to and from King Island and between Stanley and Melbourne.

On the Bruny Island service the *Harry O'May* has become the primary vessel after re-engining and re-conversion to a vehicular ferry. The *Harry O'May* joined the service in March 1978 when the *Melba* was withdrawn and placed for sale. The ferry *Mangana* is now the back-up vessel for this service. The ramps at Kettering and Barnes Bay have been upgraded to accommodate the *Harry O'May*. Modifications have also been carried out on the *Mangana* to make her better suited to the ramps. On 15 June 1978 the Government announced that the planned construction of new terminals at Kettering and Roberts Point (on Bruny Island) would be deferred.

RAILWAYS

General

Tasmania has a 1 067-millimetre gauge government railway system based on a route network of 849 kilometres. A private railway of 134 kilometres is operated by the Emu Bay Railway Company Ltd between Burnie and Melba Siding (19 kilometres south of Rosebery).

The first Tasmanian railway was the 72 kilometre Deloraine to Launceston line opened in 1871. A 196 kilometre line from Hobart to Western Junction began operating in 1876. (For a brief historical account of the development of the Tasmanian railway system see this section of the 1977 *Year Book*. Chapter 1 of the same edition includes an article on the construction of the main line railway from Hobart to Launceston.) The following table shows the length of Government-owned railways operating in the State from 1890 to the present:

Government Railways: Route-Kilometres of Lines Open at 30 June

Year	Route-kilo metres open	Year	Route-kilo metres open	Year	Route-kilo metres open
1890 (a)	602	1930	1 093	1960	866
1910	756	1940	1 036	1970	805
1920	1 012	1950	987	1977	849

(a) At 1 January 1890.

Closure of Hobart Suburban Services: The Hobart suburban rail service was closed by the State Government from 1 January 1975. The decision to close the service followed a decline in patronage over a long period and an annual loss of about \$1m attributed to suburban services. The service was re-opened for a short period in January 1975 following the collapse of the Tasman Bridge but was again closed due to lack of patronage.

Federal Takeover

Takeover Agreement

Following negotiations with the Federal Government, the State Government passed the *Railways (Transfer to Commonwealth) Act 1975* which provided for the transfer of control of the State's railway system to the Federal Government with effect from 1 July 1975.

The agreement provided for the takeover of the administration, maintenance and control of the railway system by the Australian National Railways Commission and for the transfer of Tasmanian Government Railway employees to the Commission. With the exception of some land and minor buildings and the plant, equipment and materials in the precision tool annexe at Launceston, the National Railways Commission was to take over all the assets of the Tasmanian Government Railways.

Under the agreement, however, the State retains the following rights: (i) to consult with the Federal Government on any proposals to increase freight rates; (ii) to dispute the abolition of any service where in the opinion of the State Government that service is desirable; and (iii) to consult with the Federal Government on the operation of new or existing railways which are of particular concern to the State. The State was also granted representation on the Australian National Railways Commission and the Australian Shipping Commission for an initial period of five years.

Provision was made in the agreement for the Transport Commission to continue to operate the railway after 1 July 1975, subject to direction by the Australian National Railways Commission, for a period known as 'the interim period' during which final arrangements, particularly those relating to the transfer of employees, were to be made. This period was originally expected to be 12 months but was subsequently extended.

Financial Arrangements

The Federal Government agreed to discharge the State from all liabilities and financial obligations connected with the operation of the railways thus freeing the State from the burden of: (i) interest and sinking fund contributions on outstanding loan funds (about \$0.5m annually); and (ii) the operating losses which the service was expected to incur in its continued operation (the operating loss for 1974-75 was \$15.0m).

In consideration of the transfer of railway assets, the Federal Government agreed to pay the State a sum of \$5m before the commencement date of the agreement; this would assist the State in reducing the budget deficit for 1974-75. The State was also to receive additional Financial Assistance Grants. The initial increase in the grants was to be \$3.3m and this would, in turn, increase according to the formula used to calculate the grants.

The Federal Government agreed to reduce Tasmania's loan fund allocations by only \$5m annually which was substantially less than the amount of loan funds the State Government had expected to allocate for railways. This would release additional loan funds for other capital works in the State. It was estimated that the Federal Government would spend in excess of \$60m in upgrading the railways over a five-year period.

Committee of Inquiry

In September 1976, the Federal Government appointed a committee of inquiry (the 'Joy Committee') to investigate Tasmanian rail operations. The Committee's report was released in November 1976 and a summary of it is included at the end of Chapter 11 in the 1978 *Year Book*.

Operating and Financial Statistics

The following table shows the principal operating statistics for the Tasmanian system up to 1975-76:

Government Railways (a)
Operating Statistics

Year	Route-kilometres open (b)	Train revenue-kilometres	Passenger-journeys	Goods and livestock carried
	kilometres	'000 kilometres	'000	'000 tonnes
1971-72	805	1 767	785	1 299
1972-73	831	1 960	752	1 554
1973-74	851	2 154	693	1 828
1974-75	849	1 983	(c) 429	1 731
1975-76	849	1 748	151	1 610
1976-77	849	n.y.a.	140	1 644

(a) Operated by the Tasmanian Government up to 30 June 1975; taken over by the Australian National Railways Commission from 1 July 1975.

(b) At end of period.

(c) The Hobart suburban rail passenger service ceased on 31 December 1974.

The following tables give details of gross earnings and working expenses and of the number of employees, and wages and salaries paid. Statistics for years later than 1975-76 were not available from the Australian National Railways Commission for inclusion in this edition of the *Year Book*.

Government Railways (a)
Financial Operations

Year	Gross earnings		Working expenses (b)		Net earnings (c)	
	Total	Per train revenue-kilometre	Total	Per train revenue-kilometre	Total	Per train revenue-kilometre
	\$'000	\$	\$'000	\$	\$'000	\$
1969-70	6 950	3.66	9 031	4.75	-2 081	-1.09
1973-74	7 674	3.56	15 598	7.24	-7 924	-3.68
1974-75	8 266	4.17	19 973	10.07	-11 707	-5.90
1975-76	8 048	4.60	22 087	12.63	-14 038	-8.03

(a) Operated by the Tasmanian Government up to 30 June 1975; taken over by the Australian National Railways Commission from 1 July 1975.

(b) Includes provision for depreciation but excludes interest.

(c) Excess of gross earnings over working expenses.

Government railways (a)
Number of Employees and Wages and Salaries Paid

Year	Average number of employees (b)		Salaries and wages paid (\$'000)	Year	Average number of employees (b)		Salaries and wages paid ('000)
	Salaried	On wages			Salaried	On wages	
1970-71	421	1 701	7 637	1973-74	356	1 657	11 907
1971-72	404	1 582	7 914	1974-75	354	1 637	15 198
1972-73	402	1 574	9 197	1975-76	352	1 589	16 839

(a) Operated by the Tasmanian Government up to 30 June 1975; taken over by the Australian National Railways Commission from 1 July 1975.

(b) Excludes construction staff.

Comparison with Other Australian Systems

In the two tables that follow, the Federal Government railway system refers to those railways that cross state boundaries and are run by the Australian National Railways

Commission. The Tasmanian government railway system, operated by the State Government up to 30 June 1975 but taken over by the Australian National Railways Commission from 1 July 1975, is shown separately.

The Tasmanian system of government railways is the smallest in Australia and the following table, showing principal operational details, allows a comparison to be made:

Australia: Government Railway Systems 1975-76
Operating Statistics

System	Route-kilometres open	Train revenue-kilometres	Passenger-journeys (a) (b)	Revenue goods and livestock carried (a)	Revenue net tonne-kilometres
	kilometres	'000 kilometres	'000	'000 tonnes	million
N.S.W.	9 755	54 943	159 872	31 234	8 566.9
Victoria	6 653	33 818	109 669	10 803	3 071.4
Queensland	9 844	30 813	34 278	33 118	10 101.2
S.A. (c)	3 894	10 304	12 672	6 139	1 686.6
W.A.	6 163	12 856	351	17 647	4 542.4
Tasmania (d)	849	1 748	151	1 610	231.8
Federal Government (d)	3 595	5 595	(e) 219	(f) 3 804	2 609.0
Total Australia	40 753	150 078	317 213	104 355	30 809.3

(a) Interstate traffic is included in the total for each system over which it passes.

(b) Based on ticket sales making allowances for periodical tickets. Tickets sold at concession rates are counted as full journeys.

(c) Part operated by the Australian National Railways Commission.

(d) Operated by the Australian National Railways Commission.

(e) Passenger journeys continuing over both the Trans-Australian and Central Australia Railway systems are counted twice. In 1975-76 these numbered 6 414.

(f) Tonnes carried over both the Trans-Australian and Central Australia Railway systems are counted twice. In 1975-76, 173 259 tonnes were counted twice.

The financial operations of the six state railway systems and the Federal Government system are shown below:

Australia: Government Railways, 1975-76
Financial Operations
(\$ Million)

System	Gross earnings (a)	Working expenses (b)	Net earnings (c)	Plus other earnings payable to railways (d)	Less other expenses charged to railways (e)	Surplus or deficit
N.S.W.	318.8	472.2	-153.4	4.8	55.2	-203.9
Victoria	147.3	271.9	-124.6	0.2	14.8	-139.3
Queensland	230.5	265.7	-35.2	-	52.9	-88.1
S.A. (f)	49.7	(g) 91.4	-41.7	0.4	1.9	-43.1
W.A.	130.9	(g) 118.6	12.2	1.5	16.8	-3.0
Tasmania (h)	8.0	(g) 22.1	-14.0	0.1	-	-13.9
Federal Government (h)	54.6	(g) 64.3	-9.7	-	-	-9.7
Total Australia	939.8	1 306.1	-366.4	7.0	141.7	-501.1

(a) Excludes government grants and road motor services.

(b) Excludes road motor services.

(c) Gross earnings less working expenses. See notes (a) and (b).

(d) Includes state government grants and road motor earnings.

(e) Includes interest and exchange, sinking fund, road motor expenses and other expenses charged to railways.

(f) Part operated by the Australian National Railways Commission.

(g) Includes provision for depreciation.

(h) Operated by the Australian National Railways Commission.

Financial Comparison

In comparing the financial results of the Tasmanian system with those of other authorities, certain difficulties arise from the treatment of depreciation. In the preceding table, working expenses for the Tasmanian, S.A., W.A., and Federal Government systems include provisions for depreciation. A further complication arises from the fact that interest is not charged against the railways accounts of the Federal Government system and, in the Victorian system, only in respect of loan expenditure since 1 July 1960.

To the extent that there is differing treatment of interest and of depreciation provisions in the various systems, the 'surplus or deficit' shown in the table is not a good basis for making comparisons; however, if due allowance is made for interest charges in the case of the Federal Government system, it will be seen that loss, rather than profit, is characteristic of all Australian systems.

METROPOLITAN TRANSPORT TRUST

The only Government road services in operation since 8 December 1968 (when the Transport Commission road services were discontinued) have been those operated by the Metropolitan Transport Trust at Hobart, Launceston and Burnie. Prior to this date the Transport Commission operated omnibus services throughout the State.

The present service is based entirely on motor buses although trolley-buses were in use on some Hobart and Launceston routes as late as 1968. It was in October 1960 that the Trust closed down the last of the tramway services in Hobart; Launceston City had closed down all its tramway services before the city transport system was taken over by the Trust in July 1955. Increasing motor vehicle ownership provides formidable competition to attracting passengers to urban public transport. Despite a slight increase in the number of passenger journeys in 1974-75, a trend of diminishing patronage has been evident during 1975-76 and 1976-77.

Financial Operations of Trust

The following table shows the income and expenditure of the Metropolitan Transport Trust:

Metropolitan Transport Trust
Income and Expenditure
(\$'000)

Particulars	1972-73	1973-74	1974-75	1975-76	1976-77
INCOME					
Traffic operations	2 612	2 698	2 844	2 865	2 731
Other earnings	46	52	72	135	131
Subsidy, State Government	1 692	2 520	3 957	5 156	6 030
Total	4 350	5 270	6 873	8 156	8 892
EXPENDITURE					
Traffic operations	2 407	3 025	3 961	4 390	4 659
Maintenance	664	800	1 066	1 261	1 393
Power and fuel	265	310	370	451	443
Workshop and stores	67	71	90	119	146
Administration and general	594	764	1 080	1 358	1 562
Debt charges	143	143	148	205	282
Depreciation charges	194	169	183	301	461
Total	4 333	5 283	6 897	8 084	8 945

A break-down of income earned from traffic operations in the three centres for 1976-77. (in \$'000) is as follows: Hobart, 2 015; Launceston, 547, and Burnie, 169.

Loan Debt of Trust

Net advances to the Trust from the State Loan Fund at 30 June 1977 stood at \$4 277 039.

Operating Statistics

The next table shows the principal operating statistics for the Metropolitan Transport Trust:

**Metropolitan Transport Trust
Operating Statistics**

Particulars	1972-73	1973-74	1974-75	1975-76	1976-77
Route-kilometres (a)	402	407	459	453	454
Vehicle-kilometres	8 381	8 618	9 091	9 487	9 617
Passenger journeys	18 728	19 515	20 589	20 512	19 773
Fare income per passenger journey (b) . \$	0.14	0.14	0.14	0.14	0.14
Working expenses per passenger journey (c)	0.21	0.25	0.32	0.37	0.41

(a) At end of period.

(b) Income from fares only—excludes other revenue.

(c) Excludes debt charges and depreciation.

At 30 June 1977 the Metropolitan Transport Trust had a fleet of 319 vehicles comprising 300 passenger buses and 19 maintenance vehicles. Disposition of the fleet was: Hobart, 217 passenger buses and 15 maintenance vehicles; Launceston, 62 passenger buses and five maintenance vehicles; and Burnie, 21 passenger buses and one maintenance vehicle.

ROADS AND BRIDGES**Scope**

The details relating to roads in the following section refer to:

- (i) 'classified' roads;
- (ii) roads of local government authorities; and
- (iii) roads of other government authorities.

A further qualification is that the roads are those normally open to traffic.

Definitions and Road Lengths

(i) *Classified Roads*: These are roads for which the State Government accepts direct responsibility, the construction and maintenance authority being the Department of Main Roads (previously the Public Works Department). The length of classified (or State) roads at 30 June 1977 was 3 645 kilometres (see later section for further details).

(ii) *Roads of Local Government Authorities*: The length of roads for which local government authorities accepted responsibility at 30 June 1977 totalled 12 814 kilometres.

(iii) *Roads of Other Government Authorities*: Roads which were the responsibility of these authorities at 30 June 1977 comprised: roads of the Hydro-Electric Commission, 520 kilometres; Forestry Commission, 4 857 kilometres; total 5 377 kilometres. The Hydro-Electric Commission roads include the Gordon River Road from Maydena to the Gordon River Dam site (85 kilometres) and the Scotts Peak Road which runs from the Gordon River Road to Scotts Peak Dam (35 kilometres).

Apart from some new arterial roads constructed by the Department of Main Roads (e.g. Hobart's southern and eastern outlets), works performed by the Department and local government authorities are almost entirely in the upgrading of existing roads or tracks to a higher standard and the maintenance of existing road standards. Recent construction of roads where no previous route existed has been predominantly attributable to the Forestry Commission in its development of forest areas for commercial use, and to the Hydro-Electric

Commission in providing access to power development construction sites. The main areas where the Commission's activities have already affected the road systems are in the upper Derwent; Great Lake; Mersey Valley; the Gordon and Pedder Lakes; and the Pieman River areas.

Surface of Roads

The following table shows lengths of all roads normally open to traffic classified according to road surface and according to the level of government which accepts responsibility for construction and maintenance. The proportion of classified (State) roads with sealed surfaces has increased from 72.2 per cent at 30 June 1967 to 87.5 per cent in June 1977.

Length of Roads According to Nature of Surface at 30 June

Type of surface	1973	1974	1975	1976	1977
CLASSIFIED STATE ROADS					
Sealed (a) kilometres	2 973	3 013	3 120	3 159	3 188
Unsealed (b) kilometres	548	503	487	452	457
Total kilometres	3 521	3 516	3 606	3 611	3 645
Sealed ratio (c) %	84.4	85.7	86.5	87.5	87.5
ROADS OF LOCAL GOVERNMENT AUTHORITIES					
Sealed (a) kilometres	3 363	3 552	3 697	3 849	3 998
Unsealed (b) kilometres	9 447	9 311	9 126	9 003	8 816
Total kilometres	12 810	12 862	(d) 12 823	12 852	12 814
Sealed ratio (c) %	26.3	27.6	28.8	29.9	31.2
ROADS OF OTHER GOVERNMENT AUTHORITIES					
Sealed (a) kilometres	151	151	121	121	122
Unsealed (b) kilometres	4 148	4 239	4 442	4 744	5 255
Total kilometres	4 299	4 390	4 564	4 865	5 377
Sealed ratio (c) %	3.5	3.4	2.7	2.5	2.3
ALL ROADS					
Sealed (a) kilometres	6 487	6 716	6 937	7 129	7 308
Unsealed (b) kilometres	14 143	14 052	14 055	14 199	14 528
Total kilometres	20 630	20 767	20 993	21 328	21 835
Sealed ratio (c) %	31.4	32.3	33.0	33.4	33.5

(a) Bitumen or concrete.

(b) Includes roads formed or cleared only.

(c) Sealed roads as a proportion of total roads.

(d) The reduction in length of local government roads in 1975 resulted mainly from a transfer of part of the road systems of the Brighton and Richmond municipalities to the State (classified) roads, in order to form part of the new road links made necessary by the collapse of the Tasman Bridge.

Classified (or State) Roads

The next table analyses the length of classified roads according to their description and surface. The principal State highways include the following: (i) *Arthur* (74 kilometres), from Sorrell to Port Arthur; (ii) *Bass* (283 kilometres), from Launceston to Marrawah in the far north-west; (iii) *Channel* (95 kilometres), from Hobart to Huonville, via D'Entrecasteaux

area and Cygnet; (iv) *Huon* (99 kilometres), from Hobart to Hythe via Longley and Huonville; (v) *Lake* (150 kilometres), from Deloraine via Great Lake to Melton Mowbray; (vi) *Lyell* (284 kilometres), from Granton, near Hobart, to Strahan; (vii) *Midland* (185 kilometres), from Glenorchy to Launceston; (viii) *Murchison* (78 kilometres), linking the Zeehan and Waratah Highways; (ix) *Tasman* (423 kilometres), from Hobart to Launceston, via east coast and St Helens; (x) *Waratah* (72 kilometres), from Somerset to Waratah.

*
Classified (or State) Roads
Description and Length of Roads at 30 June 1977
(Kilometres)

Description	Nature of surface		Total
	Sealed (a)	Unsealed (b)	
Highways	1 866	94	1 960
Main roads	924	140	1 063
Secondary roads	175	115	290
Tourist roads	71	79	150
Developmental roads	151	30	181
Total	3 188	457	3 645

(a) Bitumen or concrete.

(b) Gravel or stone.

Expenditure on Roads and Bridges

As indicated earlier in this section, the responsibility for road construction and maintenance is placed upon the State Government, local government authorities and two public enterprises. The next table gives a detailed analysis of funds available to the State Government for roadworks and of expenditure from State road funds:

State Road Funds: Receipts and Payments
(\$'000)

Particulars	r 1972-73	1973-74	1974-75	r 1975-76	1976-77
RECEIPTS					
Motor vehicle taxation, registration, licences, fees, fines, etc.	6 125	6 338	6 660	8 545	11 030
Federal Government grants	12 150	13 950	18 620	23 442	25 374
State Loan Fund	540	710	936	633	5 466
Contributions by local government authorities	19	17	18	19	17
Other	277	441	429	307	6 519
Total	19 111	21 456	26 663	32 946	48 406
PAYMENTS					
Construction and reconstruction of roads and bridges	13 810	15 757	18 936	24 161	38 770
Maintenance of roads and bridges	4 686	4 978	6 494	8 052	9 380
Planning and research	186	220	363	421	527
Total	18 682	20 955	25 793	32 634	48 677

Federal Government Road Grants provide the bulk of the funds with a major contribution also coming from motor vehicle taxation, registration fees, etc.

Receipts and Expenditure, Local Government Authorities

Some of the expenditure appearing in the State Road Funds table consists of grants from the State Government to local government authorities, although such grants are not specifically dissected. In Chapter 4, 'Local Government', details will be found of: (i) grants from the State to local government authorities for road purposes; (ii) road rates collected by local government authorities; and (iii) expenditure on road construction and maintenance by local government authorities from revenue, and from loan funds.

MOTOR VEHICLE REGISTRATIONS**General**

Statistics in this section deal with: (i) motor vehicles 'on register' at specific dates; and (ii) new motor vehicles registered within a specified period, e.g. a year.

Definitions

Register: To be allowed on the public roads, motor vehicles, except those owned by the Federal Government, are required to be registered with the State Transport Commission; State Government vehicles, as well as privately-owned vehicles, are registered with this authority. Federal Government-owned vehicles, except those belonging to the defence services, are recorded on a separate Federal Government register. 'On the register', in this section, refers to both the State and Federal Government registration records, and to all motor vehicles except those of the defence services. Statistics of new motor vehicle registrations comply with the same definition.

Vehicles Included: The statistics cover cars, station wagons, motor cycles and commercial vehicles. Commercial vehicles as defined include utilities, panel vans, rigid and articulated trucks, other truck-type vehicles (i.e. commercial vehicles used for purposes other than freight carrying, e.g. campervans, tow trucks, ambulances and hearses) and omnibuses. Tractors, trailers and mobile plant and equipment are excluded.

Because of the multi-purpose nature of rear-door sedans it is possible for these types of vehicles to be registered as either cars or station wagons. Up to June 1976 all rear-door sedans were classified as cars. From July 1976 they have been classified according to the vehicle type recorded by the registration authority.

Vehicles on Register

The following table has been compiled to show, in summary form, the increase in motor vehicles on the register since 1910. To give a convenient measure of this growth, vehicles on the register have been related to the population (vehicles per 1 000 persons), and increases have been expressed as annual averages for each decade.

Motor Vehicles on Register from 1910

At 30 June	Cars and station wagons	Commercial vehicles	Motor cycles	All vehicles		
				Total	Average annual increase (a)	Per 1 000 of population
	'000	'000	'000	'000	'000	No.
1910	0.2	(b)	0.2	0.4	—	2
1920	2.4	(b)	1.7	4.1	0.4	20
1930	12.5	2.2	4.8	19.5	1.5	89
1940	17.6	5.2	3.4	26.2	0.7	109
1950	25.3	12.9	4.9	43.2	1.7	156
1960	63.7	26.4	3.1	93.2	5.0	271
1970	118.6	32.6	3.1	154.3	6.1	398
1977	162.7	40.5	6.2	209.4	(c) 7.9	510

(a) For decade ending in year shown.

(b) Included with cars and station wagons.

(c) For seven years ended 30 June 1977.

The next table gives details of motor vehicles on the register during the past six years; annual increases are shown to allow comparison with the average annual increases for each decade appearing in the previous historical table.

Motor Vehicles on Register *r*

At 31 December	Cars and station wagons	Commercial vehicles	Motor cycles	All vehicles		
				Total	Annual increase	Per 1 000 of population
	'000	'000	'000	'000	'000	No.
1972.....	132.8	34.3	4.0	171.1	6.1	434
1973.....	138.7	35.0	5.1	178.8	7.7	450
1974.....	144.8	35.9	7.1	187.8	9.0	467
1975.....	155.3	37.0	7.4	199.7	11.9	491
1976.....	160.2	40.1	6.3	206.6	6.9	505
1977.....	166.5	40.7	6.0	213.2	6.6	517

Motor Vehicles on Register in Australia

While different concepts of what constitutes 'motor vehicles on register' at a particular point of time may be appropriate for different purposes, for the purpose of obtaining uniform statistics for all states and territories, it is necessary to adopt a common concept of what constitutes 'motor vehicles on register' at a particular date. For this series, the Bureau has adopted the concept of motor vehicles on register at a particular date as being: (i) vehicles whose fees were paid up at that date, in respect of that date; and (ii) vehicles whose fees were not paid up at that date but subsequently were paid retrospectively to that date (or to an earlier date); and excluding all vehicles whose fees were not subsequently paid up in respect of that particular date, even though at that date their registrations may not have been formally terminated.

The following table shows estimated details of motor vehicles on the register for each state and territory at 30 June 1977. The figures are based on the final results of the census of motor vehicles conducted in respect of 30 September 1976. Motor vehicles on register are compiled from data supplied by the various registration authorities and include diplomatic and consular vehicles and all Federal Government-owned vehicles other than those belonging to the defence services.

Australia: Motor Vehicles on Register, 30 June 1977

State or territory	Cars and station wagons	Commercial vehicles	Motor cycles	All vehicles	
				Total	Per 1 000 of population
	'000	'000	'000	'000	No.
New South Wales.....	1 752.4	404.3	95.8	2 252.5	510
Victoria.....	1 479.2	298.9	51.1	1 829.2	484
Queensland.....	751.5	239.8	76.0	1 067.2	499
South Australia.....	521.9	114.9	31.2	668.0	523
Western Australia.....	476.2	157.4	28.2	661.8	553
Tasmania.....	162.7	40.5	6.2	209.4	510
Northern Territory.....	20.4	14.1	3.5	38.1	361
Australian Capital Territory.....	81.3	13.7	3.7	98.7	474
Total.....	5 245.5	1 283.7	295.7	6 824.9	485

Registration of New Motor Vehicles

A new motor vehicle classification was introduced from 1 July 1976 for new motor vehicle registration statistics. This classification, which replaced that introduced in January 1972, has as its main features:

- (i) adoption of the principal of accepting vehicle-type data as recorded by the registration authority;
- (ii) allocation of commercial vehicles to the categories 'utilities', 'panel vans' or 'rigid trucks' solely on the basis of recorded body type; under the previous classification system these commercial vehicles were classified as 'light commercial type' (if having a carrying capacity of less than one tonne) or as 'rigid' (if having a carrying capacity of one tonne or more), the light commercial type then being further sub-divided into 'open' or 'closed'; and
- (iii) the inclusion in 'other truck types' of motorised caravans, ambulances and hearses (previously classified as 'light commercial, closed').

In the following table, which shows details of new motor vehicle registrations for recent years, commercial vehicles registered and classified previously as 'light open', 'light closed' or 'heavy' have been reclassified as 'utilities', 'panel vans' or 'trucks'.

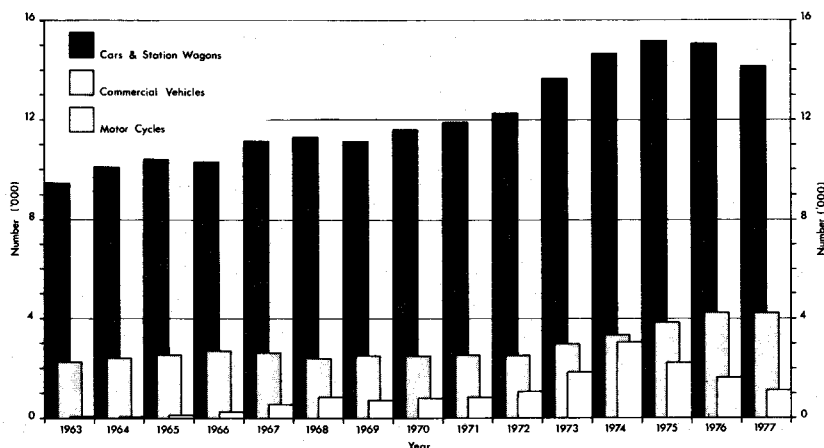
Registrations of New Motor Vehicles

Type of vehicle	1973	1974	1975	1976	1977
Motor cars	12 269	13 074	13 130	12 614	11 878
Station wagons	1 396	1 591	2 051	2 438	2 283
Commercial-type vehicles—					
Utilities	1 117	1 148	1 228	(a) 1 403	1 365
Panel vans	706	899	1 249	(a) 1 243	1 319
Trucks—					
Rigid	876	974	1 004	(a) 1 146	1 109
Articulated	171	165	133	(a) 159	134
Other (b)	12	15	16	(a) 132	219
Buses	114	138	215	169	94
Motor cycles	1 863	3 051	2 254	1 636	1 118
Total	18 524	21 055	21 280	20 940	19 519

(a) Revised classification introduction 1 July 1976—see sections preceding this table.

(b) Comprises non-freight carrying vehicles (e.g. tow trucks, fire engines and from 1 July 1976, campervans, ambulances and hearses).

Registration of New Motor Vehicles, Tasmania



Registrations of New Motor Vehicles According to Make

The table that follows gives details of Tasmanian registrations of new motor cars and station wagons according to make. It illustrates the present popularity of Holden, Ford, Datsun, Toyota and Chrysler makes which accounted for 83 per cent of all new motor vehicles of this type registered during 1977. In this table new motor vehicles registered since 1 July 1976 which may be recorded under more than one make name (e.g. Holden or Statesman, Chrysler or Dodge, Volkswagen or Audi) have been classified to the make recorded in the registration documents.

Registrations of New Motor Cars and Station Wagons, 1977
Classified by Predominant Make

Make	Motor cars		Station wagons	
	Number	Proportion of total cars (per cent)	Number	Proportion of total station wagons (per cent)
Alfa Romeo	28	0.2	—	—
B.M.W.	46	0.4	—	—
Chrysler	1 247	10.5	292	12.8
Datsun	1 358	11.4	234	10.2
Fiat	103	0.9	22	1.0
Ford	2 654	22.3	488	21.4
Holden	3 382	28.5	481	21.1
Honda	305	2.6	27	1.2
Jaguar	27	0.2	—	—
Lancia	39	0.3	1	—
Leyland	368	3.1	1	—
Mazda	452	3.8	118	5.2
Mercedes Benz	42	0.4	—	—
Peugot	42	0.4	1	—
Range Rover	—	—	43	1.9
Renault	66	0.6	32	1.4
Statesman	41	0.3	—	—
Subaru	75	0.6	140	6.1
Toyota	1 261	10.6	346	15.2
Triumph	78	0.7	—	—
Volkswagen	142	1.2	19	0.8
Volvo	78	0.7	33	1.4
Other	44	0.4	5	0.2
Total	11 878	100.0	2 283	100.0

Scrapping of Motor Vehicles

Apart from the few 'veteran' cars owned by enthusiasts, most vehicles are eventually scrapped. No information is collected on the number scrapped each year but the following table contains information from which some inferences may be drawn:

New Motor Vehicles Registered and Annual Increase in Motor Vehicles on Register
('000)

Particulars	1972	1973	1974	1975	1976	1977
New motor vehicles registered (a)	15.9	18.5	21.1	21.3	20.9	19.5
Annual increase, motor vehicles on register (b) r	6.3	7.7	9.0	11.9	6.9	6.6

(a) During year ended 31 December.

(b) Annual increase measured at 31 December.

In comparing the two sets of figures in the previous table, it would be wrong to assume that the difference in each year represented scrapped vehicles only; exceptions would include vehicles transferred interstate and vehicles 'on blocks'—the fact that an owner has let a registration expire does not necessarily mean that he intends to scrap his vehicle. Subject to these and similar difficulties of interpretation, it would appear that up to 12 000 or so motor vehicles have been scrapped during each of the last two years.

ROAD TRAFFIC ACCIDENTS IN TASMANIA

Scope of Statistics

With the rapid development of road transport, there has been an increase in the number of road traffic accidents; some merely involve damage to vehicles, but others result in injury or death. To evolve meaningful statistics describing these events, it has been found necessary to narrow the field of observation to those road traffic accidents which involve casualties, since most accidents resulting only in vehicle damage are not required by Tasmanian law to be reported to the police (the drivers might merely exchange names and report to their respective insurance companies). Further, there is the difficulty of fixing, in monetary terms, some valid standard for determining what degree of vehicle damage warrants inclusion of an accident in a long-term statistical series—obviously \$50 or \$200 for repairs in 1950 is not comparable with \$50 or \$200 for repairs now.

For these and other reasons, the statistics in this section are restricted to details of those road traffic accidents involving casualties requiring medical or surgical treatment, or causing death, and which were recorded by the police.

Responsibility for, and Causes of, Accidents

For the purpose of the statistics in this section, the police officer reporting the accident determines, on the basis of the evidence available, the road user or agency responsible, and also the prime cause of the accident. The fact that civil or criminal courts may later make different decisions on these matters is disregarded in these statistics; nor is any attempt made to distinguish between accidents giving rise to subsequent legal action and those not doing so.

Causes of Accidents

Causes of accidents in Tasmania are classified, for statistical purposes, in accordance with a standard list of 76 prime causes (although, in this section, only the most frequent causes are shown). Contributory causes and conflicting or incomplete evidence make precise classification difficult. No provision is made to record and classify such antecedent causes as fatigue, discourtesy, impatience or other driving faults. However, since July 1971 accidents where consumption of alcohol is involved have been given a special classification. Where the blood alcohol level of the road user considered responsible is 0.05 (grams of alcohol per 100 millilitres of blood) or greater, this is recorded separately and no cause for the accident is assigned. The same practice is followed for road users who were reported 'obviously affected by alcohol' by the police and: (i) refused breath and/or blood tests; or (ii) had a blood alcohol level under 0.05; or (iii) were not tested because facilities were not readily available. The double assumption in each such case is: (i) the road user's skills were impaired by alcohol; and (ii) this impairment was a factor contributing to the accident.

Road Traffic Accident Statistics

Summary

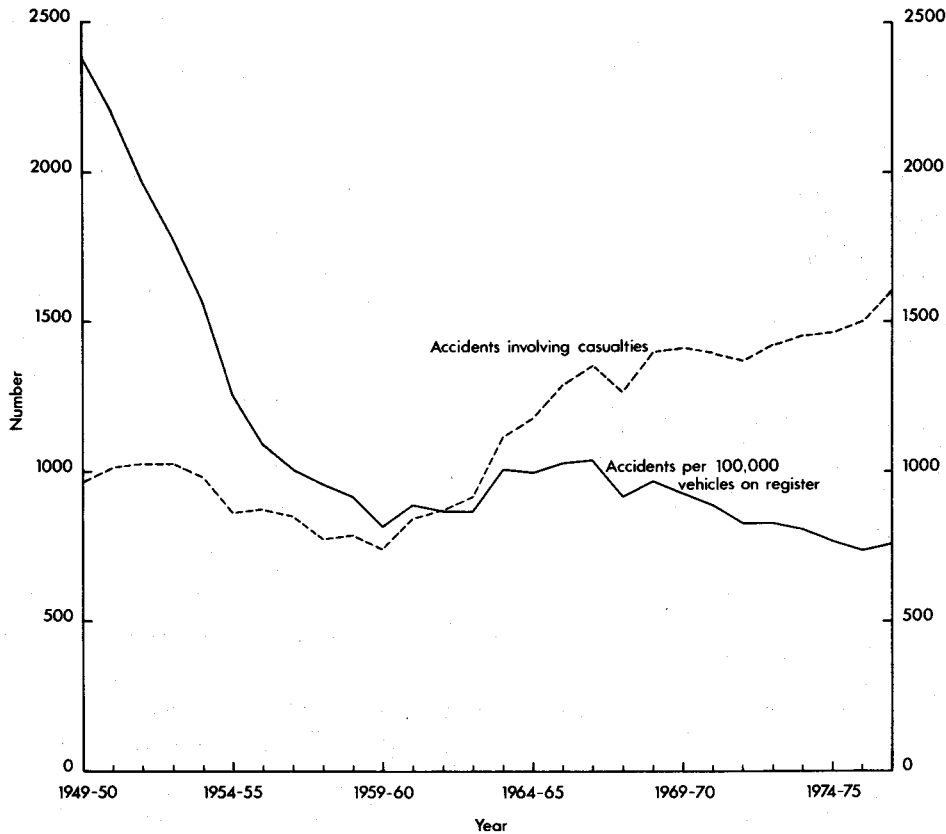
Generally there has been an increase in both the number of road traffic accidents and in the number of persons killed and injured in road traffic accidents in recent years, although the number of persons killed showed a decline in 1975-76 and 1976-77. The following table summarises the principal statistics of road traffic accidents involving casualties for selected years from 1949-50:

Road Traffic Accidents Involving Casualties, Selected Years from 1949-50

Period	Accidents		Persons			
	Number	Per 10 000 vehicles registered (a)	Killed		Injured	
			Number	Per 10 000 vehicles registered (a)	Number	Per 10 000 vehicles registered (a)
1949-50	969	238	64	16.0	1 154	288
1959-60	743	82	79	8.7	1 004	111
1969-70	1 413	93	122	8.0	2 268	150
1970-71	1 396	89	124	7.9	2 031	129
1974-75	1 466	77	120	6.3	2 061	108
1975-76	1 502	74	107	5.3	2 160	107
1976-77	1 606	77	103	4.9	2 314	110
1977-78	1 674	78	118	5.5	2 402	112

(a) Based on average number of motor vehicles on register during period. 'Vehicles on register' is defined in the earlier section headed 'Motor Vehicle Registrations'.

Road Traffic Accidents



Location of Accidents

The next table shows the location of accidents in the State:

Road Traffic Accidents and Casualties by Local Government Area, 1976-77

Local government area	Accidents involving casualties	Persons killed	Persons injured
Hobart	264	10	323
Launceston	176	4	244
Glenorchy	177	6	232
Clarence	124	2	189
Burnie	62	2	76
Devonport	85	4	138
Other	718	75	1 112
Total	1 606	103	2 314

Causes of Accidents—Drivers of Motor Vehicles Responsible

The next table analyses accidents for which drivers of motor vehicles were believed responsible:

Road Traffic Accidents Caused by Drivers of Motor Vehicles, 1976-77
Classification by Cause

Principal causes of accidents for which drivers of motor vehicles (excluding motor cycles) were responsible	Accidents involving casualties	Persons killed	Persons injured
Accidents involving alcohol—			
Driver's blood alcohol level 0.05 (a) or greater	284	28	460
Driver refused test	5	—	7
Other cases (b)	37	5	63
Other accidents—			
Excessive speed having regard to conditions	113	17	186
Not keeping to the left	59	12	122
Not giving right of way	225	3	358
Failing to make right-hand turn with due care	62	1	85
Inexperience	32	2	55
Inattentive driving	149	3	203
Reversing without care	11	—	12
Overtaking without sufficient clearance	22	—	47
Following other vehicle too closely	10	—	13
Infirmity of driver	10	—	10
Driver asleep or drowsy	22	—	27
Dazzled by lights of approaching vehicle	4	—	7
Failing to signal intention of turning or stopping	6	—	7
Pulling out from kerb without warning	19	1	24
Failing to observe traffic sign or signal	17	—	30
Hit-run (n.e.i.)	9	—	9
Other causes (including not stated or not known)	10	—	11
Total	1 106	72	1 736

(a) Grams of alcohol per 100 millilitres of blood.

(b) Driver reported 'obviously affected by alcohol' by police but blood alcohol level less than 0.05, or not tested because facilities not readily available.

Road Traffic Accidents, Drivers of Motor Vehicles Responsible (a): Summary

Accidents involving casualties	1972-73	1973-74	1974-75	1975-76	1976-77
Drivers of motor vehicles responsible—					
Number of accidents	1 031	1 053	1 010	1 019	1 106
Proportion of total accidents	72.5	72.4	68.9	67.8	68.9

(a) Excludes riders of motor cycles.

Responsibility for Road Accidents

The next table shows the type of road user or agency believed responsible:

Responsibility for Road Traffic Accidents, 1976-77

Responsibility attributed to—	Accidents involving casualties	Persons killed	Persons injured
Drivers of motor vehicles	1 106	72	1 736
Riders of motor cycles	134	10	151
Pedal cyclists	19	1	19
Pedestrians	176	13	168
Passengers	3	—	3
Motor vehicle defects	28	—	45
Motor cycle defects	9	—	10
Pedal cycle defects	2	—	2
Animals	9	1	9
Road conditions	74	1	109
Weather	7	—	8
Parties not involved (a)	30	—	44
Not stated or not known	9	5	10
Total	1 606	103	2 314

(a) e.g. a car collides with another, after swerving to avoid a pedestrian who is not struck.

Alcohol-factor Accidents, Drivers of Motor Vehicles Responsible

The following table shows the blood alcohol level and age group of drivers of motor vehicles (excluding motor cycles) believed responsible for casualty accidents:

**Road Traffic Accidents, Drivers of Motor Vehicles Responsible, 1976-77
According to Blood Alcohol Level and Age Group**

Blood alcohol level (a)	Age group of drivers responsible (in years)								Total
	Under 21	21-24	25-29	30-39	40-49	50-59	60 and over	Not stated	
Less than 0.05	6	3	1	—	—	—	—	—	10
0.05	7	3	3	—	—	1	—	—	14
0.06	3	1	1	2	3	1	—	—	11
0.07	8	7	1	4	2	1	—	1	24
0.08	7	3	3	3	2	—	1	—	19
0.09	7	6	2	4	—	1	1	—	21
0.10	3	4	—	—	1	—	1	—	9
0.11 or 0.12	16	13	7	5	4	4	—	—	49
0.13 or 0.14	12	7	3	2	3	2	1	—	30
0.15 or 0.16	10	6	4	6	4	3	2	—	35
0.17 or 0.18	6	6	6	10	3	1	—	—	32
0.19 or 0.20	7	1	2	2	1	—	1	—	14
0.21 or 0.22	2	2	6	4	1	1	—	—	16
0.23 or 0.24	1	—	2	—	2	—	—	—	5
0.25 or 0.26	—	1	—	—	—	—	—	—	1
0.27 or 0.28	—	1	—	—	—	—	—	—	1
0.29 or 0.30	—	—	—	—	—	—	—	—	—
0.31 or above	—	—	1	1	—	1	—	—	3
Refused test	—	1	1	—	2	1	—	—	5
Test facilities not available	12	3	2	7	—	2	1	—	27
Total	107	68	45	50	28	19	8	1	326

(a) Grams of alcohol per 100 millilitres of blood.

Of the 326 'driver responsible' casualty accidents in which alcohol was considered to be the possible prime or antecedent cause, 175 accidents (i.e. 53.7 per cent) involved drivers under 25 years of age.

Causes of Accidents—Pedestrians Responsible

The table below analyses road traffic accidents for which pedestrians were held responsible:

Road Traffic Accidents, Pedestrians Responsible, 1976-77
Classification by Cause

Principal causes of accidents for which pedestrians were responsible	Accidents involving casualties	Persons killed	Persons injured
Accidents involving alcohol—			
Pedestrian's blood alcohol level 0.05 (a) or greater	5	4	1
Pedestrian refused test	—	—	—
Other cases (b)	4	—	4
Other accidents—			
Walking across roadway without due care	54	5	50
Running across roadway	36	2	34
Passing behind or in front of moving or stationary vehicle or object	27	—	29
Stepping off kerb without due care	7	—	8
Children (under seven years of age) not under, or breaking away from, the supervision of an older person	29	—	30
Other causes (including not stated or not known)	14	2	12
Total	176	13	168

(a) Grams of alcohol per 100 millilitres of blood.

(b) Pedestrian reported 'obviously affected by alcohol' by police but blood alcohol level less than 0.05, or not tested because facilities not readily available.

Drivers Involved in Accidents, Age Group and Licence Type

During 1976-77 a total of 2 198 drivers of motor vehicles (excluding motor cycles) were involved in casualty accidents which were reported to the police. Of these, 27 per cent (592) were under 21 years of age and a further 30 per cent (669) were from 21 to 29 years of age.

The age group and type of driving licence held by these drivers at the time of the accident are shown in the next table:

Road Traffic Accidents, Drivers of Motor Vehicles Involved, 1976-77
According to Licence Type and Age Group

Type of driving licence	Age group of drivers involved (in years)								Total drivers involved
	Under 21	21-24	25-29	30-39	40-49	50-59	60 and over	Not stated	
Learner	17	2	1	3	1	—	—	—	24
Provisional	390	61	24	19	6	10	5	—	515
Ordinary	150	272	237	286	218	172	147	2	1 484
Interstate or international	7	25	16	14	2	1	3	—	68
No licence	26	11	14	6	8	2	3	—	70
Not known	2	4	2	5	3	3	1	17	37
Total	592	375	294	333	238	188	159	19	2 198

Road Features and Accidents

The following table analyses all accidents involving casualties according to road features at the site and shows that, in 1976-77, 40 per cent of accidents occurred on a straight section of road.

Features of Roadways on Which Accidents Occurred, 1976-77

Feature of roadway	Accidents involving casualties	Persons killed	Persons injured
At intersections—			
Controlled	79	2	105
Uncontrolled	447	10	678
Other than at intersections—			
Straight road	640	41	863
Bend or curve	422	48	649
Bridge, culvert or causeway	4	1	3
Other locations	14	1	16
Total	1 606	103	2 314

Road Users Killed or Injured

The next table analyses the type of road user killed or injured:

Type of Road User Killed or Injured, 1976-77

Type of road user involved	Killed			Injured		
	Males	Females	Persons	Males	Females	Persons
Driver of motor vehicles	31	6	37	698	274	972
Motor cyclists	11	—	11	208	4	212
Pedal cyclists	2	—	2	31	3	34
Passengers—						
Motor vehicle	22	14	36	377	466	843
Motor cycle	1	—	1	21	9	30
Other	—	—	—	—	1	1
Pedestrians	12	4	16	117	105	222
Other	—	—	—	—	—	—
Total	79	24	103	1 452	862	2 314

Types of Accidents

Most accidents arise from collisions between vehicles, followed by accidents in which vehicles overturn or leave the road, as shown in the following analysis:

Types of Accidents, 1976-77

Types of accidents	Accidents involving casualties	Persons killed	Persons injured
Collisions between vehicles—			
Angle	448	15	706
Head on	123	13	263
Rear end	113	3	163
Side swipe—Same direction	53	5	80
Opposite direction	55	8	88
Vehicle—			
Overturning or leaving road	522	42	712
Colliding with—Fixed object (incl. parked vehicle)	51	—	65
Pedestrian	226	16	221
Animal	9	1	9
Passenger accidents	4	—	4
Other types of accidents	2	—	3
Total	1 606	103	2 314

Age and Responsibility

Drivers of motor vehicles (excluding motor cycles) were believed responsible for 1 106 out of the 1 606 accidents involving casualties which were reported to the police during 1976-77.

Drivers under 25 accounted for 545 or 49.3 per cent of these accidents (male drivers under 25, 450; female drivers under 25, 95).

Casualties associated with accidents attributed to drivers under 25 were: killed, 53; injured, 895.

The following table analyses the age and sex of the drivers responsible:

Road Traffic Accidents, 1976-77
Age and Sex of Drivers of Motor Vehicles Responsible

Age group of drivers responsible (in years)	Male driver			Female driver		
	Accidents involving casualties	Persons killed (a)	Persons injured (a)	Accidents involving casualties	Persons killed (a)	Persons injured (a)
Under 17	11	5	13	2	—	5
17-20	284	33	464	59	3	101
21-24	155	10	253	34	2	59
25-29	100	4	165	28	—	48
30-39	101	5	146	36	—	53
40-49	72	3	106	26	—	38
50-59	70	1	101	19	1	24
60 and over	73	3	112	25	1	37
Not stated (b)	10	1	10	1	—	1
Total	876	65	1 370	230	7	366

(a) The age groups relate to the driver who may or may not be included in the casualty figures.

(b) Includes accidents for which hit-run drivers were responsible.

Age and Sex of Road Users Killed

The next table shows the age and sex of the various types of road user killed:

Road Traffic Accidents, 1976-77
Age and Sex of Road Users Killed

Age group (in years)	Type of road user killed					All road users
	Drivers of motor vehicles	Motor cyclists	Pedal cyclists	Passengers (all types)	Pedestrians	
MALES						
Under 7	—	—	—	—	—	—
7-16	1	5	1	6	2	15
17-20	12	3	1	11	2	29
21-29	9	2	—	5	1	17
30-39	2	1	—	1	2	6
40-49	2	—	—	—	—	2
50-59	1	—	—	—	—	1
60 and over	4	—	—	—	5	9
Not stated	—	—	—	—	—	—
Total	31	11	2	23	12	79

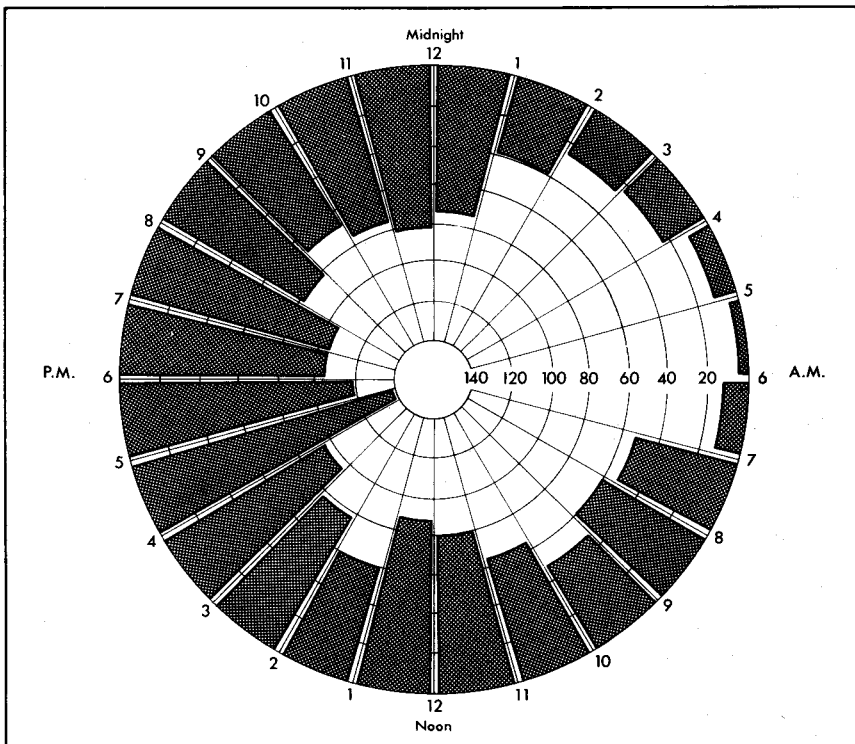
Road Traffic Accidents, 1976-77
Age and Sex of Road Users Killed—continued

Age group (in years)	Type of road user killed					All road users
	Drivers of motor vehicles	Motor cyclists	Pedal cyclists	Passengers (all types)	Pedestrians	
FEMALES						
Under 7	—	—	—	—	—	—
7-16	—	—	—	4	—	4
17-20	1	—	—	3	1	5
21-29	2	—	—	4	—	6
30-39	1	—	—	—	—	1
40-49	—	—	—	1	—	1
50-59	1	—	—	2	—	3
60 and over	1	—	—	—	2	3
Not stated	—	—	—	—	1	1
Total	6	—	—	14	4	24

Time of Day When Accidents Occurred

The following diagram shows the time of day when accidents involving casualties occurred during 1976-77:

Time of Day when Accidents Occurred: 1976-77



Days of the Week on Which Accidents Occurred

The following table shows accidents and casualties according to the day of the week on which they occurred:

Road Traffic Accidents, 1976-77
Days of the Week on Which Accidents Occurred

Day of the week	Accidents involving casualties	Persons killed	Persons injured
Monday	158	5	219
Tuesday	155	8	198
Wednesday	201	16	271
Thursday	241	10	325
Friday	283	11	409
Saturday	321	30	456
Sunday	247	23	436
Total	1 606	103	2 314

Source of Data

Details of each road traffic accident reported to the police, or investigated by the police are recorded on a standard form and copies are made available to the Transport Commission and to the Australian Bureau of Statistics; at the Bureau, quarterly statistics are compiled only from those reports describing accidents involving casualties. The Transport Commission employs the reports it receives in connection with road engineering, the location of traffic signs and signals, the pin-pointing of dangerous locations, traffic engineering, and accident prevention in general.

No-Fault Third Party Insurance

'No-fault' third party insurance was introduced in Tasmania on 1 December 1974 under the *Motor Accidents (Liabilities and Compensation) Act 1973*. Prior to the introduction of the 'no-fault' scheme, motorists were compelled to insure with insurance companies against claims by other persons resulting from motor vehicle accidents. The success of a claim was dependent upon the claimant proving negligence (or fault) on the part of the driver of a motor vehicle. 'No-fault' insurance, however, entitles a person to compensation for injuries sustained in a motor vehicle accident without regard to who was at fault. The extent of the compensation is determined by the scheduled benefits outlined in the Act. The operation of the scheme does not, however, preclude the individual from suing for damages should it be felt that the scheduled benefits are insufficient compensation and that the accident was the result of negligence. Insurance is compulsory under the Act.

Premiums

Premiums vary according to the type of vehicle and the purpose for which it is used. On 1 December 1977, the annual premium for most private passenger-type motor vehicles was reduced to \$44.00 from \$56.00, while premiums for motor cycles were increased substantially. Premiums are subject to review annually by the Premiums Board of Tasmania which was established under the Act to recommend rates of premiums to the Minister responsible.

Scheduled Benefits

The more important of the scheduled benefits prescribed in the Act are:

- (i) Medical, hospital and ambulance expenses.
- (ii) Disability allowances for employed persons, self-employed persons or housekeepers.
- (iii) Dependant's allowance.
- (iv) Death benefits.
- (v) Funeral benefits.

Motor Accidents Insurance Board

The Motor Accidents Insurance Board, set up to administer the Act, consists of five members who are appointed by the Governor. The chairman, a legal practitioner, is appointed directly and the other four members are each appointed on the recommendation of one of the following organisations: (i) the Tasmanian Government Insurance Board; (ii) participating insurers other than the Tasmanian Government Insurance Board; (iii) the Transport Commission; and (iv) the Royal Automobile Club of Tasmania (representing the interests of motor vehicle users). The Board may enter into agreements with insurance companies to allow them to act as agents in the administration of the Act.

AIR TRANSPORT IN TASMANIA

Introduction

During 1977, Ansett Airlines of Australia and Trans-Australia Airlines were operating the greater percentage of passenger traffic to and from the Tasmanian mainland with 96 jet aircraft and 66 prop-jet aircraft flights per week. Executive Airlines Pty Ltd operate a commuter service between Melbourne and Flinders Island on five days per week.

Supplementary intrastate services began during 1964 and in 1977 there were two intrastate services: Air Tasmania Pty Ltd operating between Hobart and ports on the Tasmanian mainland; and Executive Airlines Pty Ltd operating between Launceston and Flinders Island, Launceston and King Island and King Island to Wynyard and Devonport.

Air freight is carried regularly between Melbourne and the major Tasmanian airports and islands in a variety of aircraft ranging from Lockheed Electras of Ansett Airlines of Australia and quick-change Fokker F27 aircraft of Trans-Australia Airlines, to the Argosy, DC3 and Bristol Freighters of the major charter operators.

Administration

Administration of the Air Navigation Act and Regulations in Tasmania

The Federal Air Navigation Act 1920 and associated regulations are administered for Tasmania by the Director, Department of Transport, Victoria-Tasmania Region. The authority is the Federal Department of Transport. The Department's more important functions include the provision and maintenance of government aerodromes and associated facilities, the licensing of aircraft operators and pilots and a responsibility for supervising all aspects of air safety.

Classification of Flying Activities

Flying activities are classified by regulation into the following well-defined categories:

- (i) *Private Operations*: Being operations in which an aircraft is used for personal transportation—private or business, carriage of persons or goods for other than hire or reward, or other activities of a non-commercial nature.
- (ii) *Aerial Work Operations*: These operations refer to the aircraft being used for aerial survey; spotting; photography; agriculture; advertising; flying training; and the cartage of goods being the property of the pilot, owner or hirer of the aircraft for purposes of trade. Within Tasmania there are five licensed flying training organisations and two aerial agricultural organisations carrying out most of the aerial work activities.
- (iii) *Charter Operations*: These refer to aircraft hired for passenger or cargo movement, usually not between fixed terminals or to fixed schedules. There are 12 licensed charter operators based in Tasmania.
- (iv) *Commuter Operations*: These are regular public transport operations, conducted on a fixed schedule between fixed terminals. Operators are authorised to operate without holding airline licences by exemptions granted under Air Navigation Regulation 203. Tasmania has two approved operators.
- (v) *Regular Public Transport*: This refers to aircraft operating under an airline licence to carry passengers and cargo according to fixed schedules and on

specified routes. All services of this kind are provided to Tasmania by Ansett Airlines, East-West Airlines and Trans-Australia Airlines.

Tasmanian Aerodromes

The major aerodromes in Tasmania are owned and operated by the Federal Government through the Department of Transport. The following sections describe both Federal Government-owned and other aerodromes in Tasmania.

Federal Government-owned Aerodromes

Hobart Airport: Ranks seventh in the volume of passengers handled at Australian terminals. It was completed in 1956. Extension and strengthening of the runway, taxiway and aprons to take DC9 and Boeing 727 aircraft at full weight was completed in 1966. The airport is equipped with complex aviation aids. New terminal and communication buildings were completed in 1976. It lies 18 kilometres by road from the city. A helicopter charter service operates between the airport and the city.

Launceston Airport: 16 kilometres south-east of Launceston, it ranks after Hobart in passenger volume but handles considerably more freight. The area control centre provides air traffic control for Tasmania via repeater stations, south on Mount Wellington and north on Mount Barrow. The airport is also used for flying training, light aircraft charter and aerial work operations.

Devonport Airport: This was originally constructed in the early 1930s. In 1950 it was developed to handle DC3, DC4 and Viscount-type aircraft. Regular passenger services (using F27 aircraft), aerial and charter work, flying training and private operations are carried on from this location. It now ranks next to Wynyard in the number of passengers carried.

Wynyard Airport: This has one sealed runway of 1 341 metres and one 1 189 metres long for regular public transport operations, charter, aerial work and private operations.

King Island Airport: Is located six kilometres north-east of Currie. It has three gravel runways, night lighting and radio navigational equipment.

Flinders Island Airport: Is located five kilometres north of Whitemark. There are two gravel and one grass landing strips plus an apron, taxiway, terminal and navigation aid facilities.

Cambridge Airport: This was constructed during the early period of aviation and has four runways. The proximity of hills prevent further development and after completion of the Hobart Airport, Cambridge became a centre for light aircraft activities.

Locally Owned Aerodromes

Smithton Airport: Located three kilometres west of Smithton, it is owned by the Transport Commission. It has a sealed main runway plus lesser gravel strips and is used for itinerant charter and private flights.

St Helens Airport: The aerodrome is owned and operated by the Municipality of Portland. A grassed strip 1 189 metres long and 91 metres wide is of sufficient dimension to permit operations by DC3 and F27-type aircraft. The aerodrome currently serves the charter, aerial work and private operation requirements for the area and has a non-directional beacon for instrument navigation.

Queenstown Airport: The Municipality of Queenstown provided an authorised landing area for light aircraft in 1937. In 1963 work was commenced on the construction of a runway suitable for the operation of DC3-type aircraft at Queenstown under the local ownership plan; this was opened on 17 April 1966.

Strahan Airport: This airport, together with Queenstown Airport, services the west coast of Tasmania. Opened for regular public transport operations in 1964, Strahan aerodrome was constructed under the aerodrome local ownership plan and is owned by the Municipality of Strahan.

Aircraft, Passenger and Freight Movements

The following table shows the number of scheduled aircraft movements at the principal airports in Tasmania during recent years. For the purposes of the statistics in this table a take-

off is regarded as one movement and a landing as another.

Aircraft Movements: Principal Airports

Year	Hobart (a)	Launceston	Devonport	Wynyard	King Island	Flinders Island
1972.....	6 254	10 581	4 147	4 144	1 283	591
1973.....	7 061	11 297	4 982	4 769	1 279	604
1974.....	7 599	10 982	5 409	5 148	1 079	(b) 349
1975.....	7 365	9 856	4 775	4 334	732	—
1976.....	7 543	9 532	4 224	3 899	693	—
1977.....	8 073	10 265	3 944	4 006	707	—

(a) The phasing-out of turbo-prop aircraft and the introduction of pure jet aircraft has increased carrying capacity and reduced the number of flights required.

(b) Regular public transport operated by Ansett Airlines of Australia ceased from October 1974.

The next table shows the volume of passengers and freight handled at each airport; the following definitions apply:

Passengers: The figures are for fare-paying passengers only at each airport and are the sum of embarkations and disembarkations.

Freight: The figures are the sum of all revenue freight (including excess baggage) loaded and unloaded at each airport.

Passenger and Freight Movements: Principal Airports (a)

Year	Hobart	Launceston	Devonport	Wynyard	King Island	Flinders Island
PASSENGERS ('000)						
1972.....	236	216	76	69	23	11
1973.....	345	271	95	82	26	12
1974.....	392	294	107	91	22	(b) 7
1975.....	371	287	100	90	15	—
1976.....	399	299	88	85	13	—
1977.....	411	326	83	83	13	—
FREIGHT (Tonnes)						
1972.....	6 487	9 701	318	266	401	118
1973.....	6 449	12 368	434	304	287	118
1974.....	7 130	12 131	404	343	220	(b) 60
1975.....	7 040	11 646	337	335	122	—
1976.....	8 111	13 324	363	316	114	—
1977.....	8 575	14 964	355	331	118	—

(a) See definitions preceding this table.

(b) Regular public transport operated by Ansett Airlines of Australia ceased from October 1974.

The increase in the total number of passengers carried by the principal airports (as shown in the above table) in 1977 over 1976 was 3.5 per cent. The total freight carried showed an increase of 8.7 per cent in 1977 compared to 1976.

Comparison of Principal Australian Airports

The next table shows the volume of activity at the principal Australian airports in terms of the number of passengers, freight and aircraft movements. Details of international services have been excluded so that comparisons are purely in terms of domestic traffic (international services are centred on Melbourne, Sydney, Brisbane and Perth).

Australia: Principal Airports
Passengers, Freight and Aircraft Movements (a), 1977

Airport	Passengers	Freight (tonnes)	Aircraft movements
Sydney	4 986 926	48 033	90 279
Melbourne	4 291 450	60 524	68 558
Brisbane	2 221 097	25 560	36 361
Adelaide	1 621 761	18 865	24 390
Canberra	917 090	3 753	17 239
Perth	733 688	12 344	11 735
Hobart	411 456	8 575	8 073
Launceston	325 560	14 964	10 265

FREIGHT EQUALISATION

In April 1974, Mr. J. F. Nimmo was appointed by the Federal Government as Commissioner of a 'Commission of Inquiry into Transport to and from Tasmania'. The Commission's report (the 'Nimmo Report') was presented to the Government in March 1976. A summary of the report is included in the 1977 *Year Book*.

The Commission was appointed because of the widely held view that Tasmania suffered a considerable disability with regard to freight and passenger rates to and from mainland Australia compared to other states.

Following release of the Commission's report, the Federal Minister for Transport, on 9 June 1976, released details of a scheme to be administered by the Tasmanian Branch of his Department for equalising the trans Bass Strait freight costs of Tasmanian manufacturers and producers who shipped goods for sale or use on the mainland. The scheme provided assistance to Tasmanian manufacturers and producers broadly equal to the difference between the actual door to door freight cost associated with moving goods by sea from Tasmania and the door to door cost of moving similar goods over comparable routes on the mainland.

The following measures were associated with the introduction of freight equalisation assistance:

- (i) Sea freight rates were to be restored to economic levels. This involved increases to north-bound freight rates which had been frozen since 1974, a lesser increase in south-bound rates and an increase of about 15 per cent in the Devonport-Melbourne passenger fares.
- (ii) The Australian National Line passenger service between Sydney and Tasmania was discontinued.
- (iii) The railway rates were to be increased to bring these nearer to economic levels.
- (iv) The annual subsidy on the *Empress of Australia* passenger service was increased from \$1 million to \$2 million.

The Minister said that the equalisation scheme and associated measures were based largely on the Nimmo Report and that other aspects of the Report would be considered later. The rates of assistance would be reviewed in 18 months and the scheme reassessed not later than 1980. In introducing assistance for north-bound goods, the Minister said that assistance for south-bound manufacturers' and producers' goods would be announced as soon as practicable.

Assistance for south-bound manufacturers' and producers' goods and equipment was announced in November 1977 and made retrospective to 1 July 1976. The goods eligible for south-bound assistance must be of Australian origin and suffer an actual freight disability. Eligible producers are: (i) primary producers in respect of equipment and packing materials; and (ii) manufacturers and mining undertakings in respect of equipment used in the production process and raw material inputs (providing these total more than 5 per cent of the factory door cost of the finished product).

At the direction of the Federal Minister for Transport, the Bureau of Transport Economics reassessed the freight disability for north-bound goods in late 1977. The Minister released the Bureau's report and announced new rates of assistance on 15 July 1978 with the retrospectivity to 1 July 1978.

Freight equalisation payments in 1977-78 totalled \$20 926 670, comprising \$18 783 171 paid to north-bound freight claimants and \$2 143 498 paid to south-bound claimants (which included retrospective payments to 1 July 1976).

POSTAL AND TELECOMMUNICATIONS SERVICES

Introduction

Prior to 1 July 1975 the Postmaster-General's Department provided and controlled postal and telecommunications services in Tasmania, supported by engineering, finance and accounting, supply, personnel and administrative establishments. From 1 July 1975 control of these services has been vested in two commissions: the Australian Postal Commission (Australia Post) and the Australian Telecommunications Commission (Telecom). The activities of these bodies in Tasmania are outlined below.

Australia Post

Apart from its obvious role of providing postal services, Australia Post also acts as an agent for a number of other instrumentalities in transactions which include: Commonwealth Savings Bank deposits and withdrawals; Telecom Australia account payments; telegrams; Defence Home repayments; sale of State duty stamps and sale of income taxation instalment stamps.

Postal Money Orders

From 21 November 1977 the postal order and money order services were replaced by a postal money order service. As well as providing a money transfer service by mail, postal money orders can also be sent by telegraph. Charges are 20 cents for amounts up to one dollar and 50 cents for amounts over one dollar up to \$500. Orders for overseas are limited to \$100 and a remitter may send only one such order in any week. The charges are \$1.50 for orders of up to \$30, and five cents for each dollar, or part of a dollar, for amounts over \$30.

The Postal Service

The first long-distance overland mail service in Australia was started between Hobart and Launceston in 1816, the carrier walking both ways and taking a fortnight for the round trip.

The number of individual postal articles handled in Tasmania in 1976-77 amounted to 51.5 million compared to 50.7 million in 1975-76. Australia Post handled 2 358 million articles throughout Australia in 1976-77 compared to 2 357 million in the previous year.

Postal Services (a), Tasmania

Particulars	Unit	1971-72	1972-73	1973-74	1974-75	1975-76	1976-77
Post offices—							
Official	no.	46	46	46	46	46	42
Non-official	no.	288	284	251	234	222	220
Postal traffic (b)—							
Standard letters	'000	61 553	63 187	63 272	59 644	44 829	45 406
Non-standard articles	'000					5 528	5 627
Parcels	'000	352	358	289	308	220	310
Registered articles ...	'000	268	228	203	193	132	126
Total	'000	62 173	63 773	63 764	60 145	50 709	51 469

(a) Controlled by Postmaster-General's Department up to 1 July 1975.

(b) Number of separate articles handled.

All mail to and from Tasmania and the Mainland is carried by air as far as Melbourne, priority being given to priority paid mail, standard articles and mail on which airmail fees have been paid. The balance is forwarded on an 'Air Opportunity' basis. A local priority paid mail service was introduced in November 1975 and provides guaranteed delivery within Hobart

and suburbs on the next working day. This service is also available between Hobart, Launceston, Devonport, and Burnie. An overnight parcel service, introduced towards the end of 1976, provides for next working day delivery of all mail throughout the State, with only minor exceptions.

Australia Post also provides courier services for urgent items in Hobart with an intrastate network extending to Launceston, Devonport, Ulverstone and Burnie and an interstate network which includes all state capitals, as well as Canberra.

At 30 June 1977 Australia Post had a full-time staff in Tasmania of 789, 70 persons were employed part-time, 239 were employed at non-official post offices (and paid on the basis of the volume of business transacted) and 98 had mail service contracts with Australia Post. There were 536 street posting boxes in the State and 181 street delivery rounds were in operation.

Australian Telecommunications Commission (Telecom Australia)

Development of Telecommunications

Hobart and Launceston were linked by a telegraph line in 1857 and two years later a Bass Strait cable was in operation, only to fail in 1861. By 1869 a second cable was laid and communication with overseas countries became possible in 1872 when the Overland Telegraph was established between Adelaide and Darwin.

The first telephone line in Tasmania linked Hobart and Mt Nelson signal station in 1880, both Hobart and Launceston having exchanges by 1833. However, no link with Victoria or overseas countries was provided until 1936.

The State is now served with a network of high-capacity, high-quality trunk channels which are extended to other Australian states and linked with the Seacom and Compac cables connecting Australia to overseas countries. There are also links to the Overseas Telecommunications Commission earth satellite stations at Carnarvon, Ceduna and Moree. The State is divided into three districts (which coincide with the S.T.D. area code districts), each in the charge of a District Telecommunications Manager.

Telegraph: The teleprinter exchange (TELEX) had only one Tasmanian subscriber in 1957 but 736 were connected by 30 June 1978. The TELEX service is fully automatic and subscribers can now contact each other without an exchange operator's assistance. Calls can be made automatically to many overseas countries tied in with Australian telegraphic services, while the remainder can be contacted through an exchange operator. Extensive use is made of the long established picturegram service by the press; organisations such as the Bureau of Meteorology and private companies have a similar service available for the transmission of charts and documents.

Telephones: The Commission completed the conversion to automatic working of all the telephone exchanges in Tasmania on 15 June 1977. There were then 198 automatic exchanges in the State. Tasmania became the first Australian State to have a fully automatic telephone system.

Telephone and Telegraph Services

The following table analyses telephone and telegraph services in Tasmania:

Telecommunications Services (a)

Particulars	Unit	1972-73	1973-74	1974-75	1975-76	1976-77	1977-78
Telephone—							
Services in operation (b)—							
Business	'000	38	38	37	35	36	36
Non-business	'000	46	51	57	64	69	75
Total	'000	84	89	95	99	104	111
Public telephones	'000	1	1	1	1	1	1
Instruments in operation (b)	'000	118	127	133	140	146	155
Automatic exchanges (b)	no.	183	189	191	195	198	197
Manual exchanges (b)	no.	47	35	21	11	—	—

Telecommunications Services (a)—continued

Particulars	Unit	1972-73	1973-74	1974-75	1975-76	1976-77	1977-78
Value of calls made—							
Metered (local and S.T.D.)	\$'000	8 430	10 354	12 666	17 150	19 313	24 748
Trunk	\$'000	2 562	2 585	2 297	2 062	2 099	2 175
Public telephone (local and trunk)	\$'000	558	601	721	974	1 146	1 271
Telegraph—							
Phonograms lodged	'000	259	256	221	194	173	143
All telegrams lodged (c)	'000	473	472	424	356	298	242

(a) Telecommunications services were controlled by the Postmaster-General's Department prior to 1 July 1975.

(b) At 30 June.

(c) Includes telegrams lodged by telephone (i.e. phonograms).

The installation in recent years, of the high-capacity trunk channels, known as the Broadband System, together with modern trunk switching exchanges, has enabled the Commission to provide Subscriber Trunk Dialling (S.T.D.) facilities for the direct dialling of trunk calls. This facility enables subscribers to make direct long-distance calls to anywhere in Australia by simply dialling the required number. All telephone subscribers in Tasmania have access to S.T.D. which avoids the delays associated with manually-operated exchanges. Charges are based on actual time used and there is no minimum time period as with manually booked trunk calls.

International Subscriber Dialling (I.S.D.) to more than 140 countries is now available upon request to 41 504 telephone subscribers throughout the State. At the end of June 1978, 1 869 subscribers had availed themselves of this facility.

There is an increasing demand for facilities to transmit digital data over telephone and telegraph lines. The data can be sent over three alternative links: (i) through the telephone network; (ii) by direct point to point private telephone or telegraph lines provided exclusively for the customer; and (iii) through the telex network.

Lines suitable for high speed transmission can be provided using alternatives (i) and (ii). Originally known as 'Data Transmission', this service has been renamed 'Datel'. Digital data information must be converted into a form suitable for transmission over the lines provided by the Commission. The conversion is performed by a modulator/demodulator unit known as a 'Modem'. At 30 June 1978, 345 Modems were in service in Tasmania.

The 'Telefinder Radio Paging Service', which commenced in Hobart on 14 November 1977 provides a point to point contact facility whereby a Telefinder subscriber carries a lightweight pocket receiver which emits an audible 'Beep' when it receives a signal broadcast from a paging radio transmitter. The alerted customer then takes some pre-arranged course of action such as contacting his office to receive information. At 30 June 1978, 198 paging units were in operation in the State.

RADIO COMMUNICATION

Stations in Tasmania

To establish and operate radio communication equipment, it is necessary to obtain a licence from the Postal and Telecommunications Department. This Department is responsible for overall management of the radio frequency spectrum involving the following radio regulatory functions: (i) frequency allocation; (ii) frequency measuring and radio monitoring; (iii) determination of equipment standards; (iv) conduct of examinations for Radio Operators' Certificates of Proficiency; (v) inspectoral functions; and (vi) licensing formalities. The radio frequency spectrum is a national resource although it is somewhat different from other resources such as minerals, water, fuels, fisheries, forestry, etc. The radio frequency spectrum is used and not consumed and it is wasted when not used correctly. It is

for this reason that the Postal and Telecommunications Department makes every effort to ensure interference-free operation for all services.

Some examples of the use to which this form of communication is put include: (i) mobile radiotelephone networks operated by governmental and semi-government bodies including Tasmania Police, the Hydro-Electric Commission, Forestry Commission, fire brigades, municipal councils, etc.; (ii) mobile radiotelephone networks operated by private enterprises such as transport and taxi companies, building contractors, etc.; (iii) coastal radio services to ship stations at sea provided by stations operated by the Overseas Telecommunications Commission; (iv) coastal radio services for fishing boats provided by stations operated by private enterprises engaged in the fishing industry at various ports around the Tasmanian coastline; and (v) coastal radio stations in the International VHF Maritime Mobile Radiotelephone Service operated by various Marine Boards for ship-to-shore communications with overseas ships.

A new category of licence, the Citizens Band Radio Service became available from 1 July 1977. The Service is defined as: 'A private, two-way short distance voice communication (radiotelephony) service of fixed, land mobile and portable stations for personal and business activities'. There were 18 high frequency channels allocated within the frequency range 27.015 to 27.225 megahertz and 40 ultra-high frequency channels were allocated from 476.425 to 477.400 megahertz. The C.B.R.S. has shown a rapid growth in popularity from persons engaged in all walks of life.

The next table relates to radio communication stations only; particulars of broadcasting stations are specifically excluded and are dealt with in a subsequent section.

**Number of Authorised Radio Communication Stations at 30 June
(Two-way Services)**

Particulars	1973	1974	1975	1976	1977	1978
Fixed stations—						
Outpost (a)	16	14	11	10	9	5
Other (b)	103	110	108	118	113	136
Total	119	124	119	128	122	141
Land stations—						
Aeronautical (c)	8	7	7	7	8	8
Base stations for—						
Land mobile services (c)	523	627	684	726	798	860
Harbour mobile services (c) ..	7	8	12	14	30	34
Coast (d)	36	37	38	37	38	44
Experimental	16	16	17	17	27	44
Total	590	695	758	801	901	990
Mobile stations—						
Aircraft	48	52	54	57	57	71
Land mobile services	4 606	4 562	5 223	5 674	6 039	6 539
Harbour mobile services	69	82	116	162	464	731
Outpost	43	45	48	45	46	45
Ships	691	781	789	805	802	859
C.B. radio service	—	—	—	—	—	5 050
Total	5 457	5 522	6 230	6 743	7 408	13 295
Amateur stations	224	229	240	243	256	321
Grand total	6 390	6 570	7 347	7 915	8 687	14 747

(a) Stations established in remote localities for communication with control stations, e.g. the lighthouse service.

(b) For exchange of radio messages with other similar stations.

(c) For exchange of radio messages with mobile stations.

(d) Land stations for communication with ocean-going vessels.

RADIO AND TELEVISION SERVICES

Radio broadcasting and television falls within the jurisdiction of the Federal Government and is one of the responsibilities of the Minister for Post and Telecommunications. Federal bodies which are directly involved include the Postal and Telecommunications Department, the Australian Broadcasting Commission, the Australian Broadcasting Tribunal, the Australian Telecommunications Commission and a special Authority for ethnic broadcasting.

Types of Services

Basically the Australian broadcasting and television system consists of three types of service comprising:

- (i) national broadcasting and television stations funded by the Federal Government;
- (ii) commercial broadcasting and television stations operated by companies under licence; and
- (iii) public stations operated by corporations under licence on a non-profit basis.

Regulation

Provisions contained in the *Broadcasting and Television Act 1942* govern the establishment and operation of all stations. The *Postal and Telecommunications Department* is responsible for planning of the overall system, for the submission of planning proposals for consideration by the Minister, for all matters relating to the technical operation of stations and for the investigation of interference to the transmission and reception of programs.

In relation to the national service, the *Australian Broadcasting Commission* is required to provide programs for transmission over stations made available by the *Australian Telecommunications Commission* and to supply and operate the studio equipment necessary for the purpose. The *Australian Broadcasting Tribunal* is responsible for the licensing and supervision of the operation (other than the technical equipment) of all stations other than national stations. In particular, the Tribunal is required to conduct public inquiries into the granting of licences following the invitation of applications by the Minister, and into the renewal of licences, the setting of standards of broadcasting practices, alleged breaches of licence conditions and such other matters as the Minister may direct. Subject to the conduct of such inquiries, the Tribunal is empowered to grant, renew, suspend or revoke licences and to determine program and advertising standards applicable to licensed stations.

The National Services

The national services (both radio and television) are provided by the Australian Broadcasting Commission which has sole responsibility for program material; the actual transmitters are operated by the Australian Telecommunications Commission.

Commercial Broadcasting

Commercial radio and television broadcasting stations are operated by companies under licences granted by the Australian Broadcasting Tribunal. Their technical operating conditions are determined by the Postal and Telecommunications Department. The stations obtain income from the broadcasting of advertisements. The fee for a licence is \$200 plus an amount based on the gross earnings from advertising during the preceding financial year, assessed on a sliding scale varying from 1 per cent for amounts up to \$0.5m to 4.5 per cent on amounts exceeding \$3.5m.

Broadcasting Standards

Commercial radio and television stations are required to maintain standards set by the Australian Broadcasting Tribunal. These standards include requirements relating to the acceptability of program material, duration and suitability of advertisements and special provisions relating to children's programs.

Category of Television Programs

The following table shows, as varying proportions of transmission time, the types of programs televised in Tasmania:

**Category of Television Programs by
Proportion of Transmission Time: Tasmania, 1977**
(Source: Australian Broadcasting Tribunal)

Program category	Commercial programs	National programs
	per cent	per cent
Cinema movies	13.1	2.9
Other drama	32.8	13.6
Light entertainment	16.6	10.0
Sport	8.6	14.9
News	4.2	6.9
Children	5.9	19.1
Family activities	2.2	1.6
Information	2.3	8.7
Current affairs	2.8	7.7
Political matter	—	—
Religious matter	2.8	1.7
The Arts	—	1.5
Education	—	11.4
Advertising	9.0	—
Total	100.0	100.0

Television Stations in Operation

The next table gives details of the television stations in operation:

Television Stations in Operation, 30 June 1978

Call sign and channel	Area	Transmitter location	Height above sea level—top of aerial (metres)
NATIONAL			
ABT 2	Hobart	Mt Wellington	1 344
ABNT 3 (a)	N.E. Tasmania	Mt Barrow	1 457
ABKT 11 (a)	King Island	Gentle Annie Hill	245
COMMERCIAL			
TVT 6	Hobart	Mt Wellington	1 323
TNT 9	N.E. Tasmania	Mt Barrow	1 419

(a) Transmits programs originating from ABT 2.

Relay of Television Programs from Other States

Tasmania is linked with Victoria by a broadband radio link installed by the Australian Telecommunications Commission which enables the direct relay of television programs from the mainland states.

Microwave Links, Intrastate Relays and Translator Stations

The prime sources of programs in Hobart are the commercial and national studios which are linked to their Mt Wellington transmitters (TVT6 and ABT2) by microwave links; the commercial studio in Launceston feeds programs to its Mt Barrow transmitter (TNT9) by the same method. As there is no national studio at Launceston, the transmitter on Mt Barrow (ABNT3) relays the Hobart national programs through the broadband radio link. A similar service is also available to commercial stations.

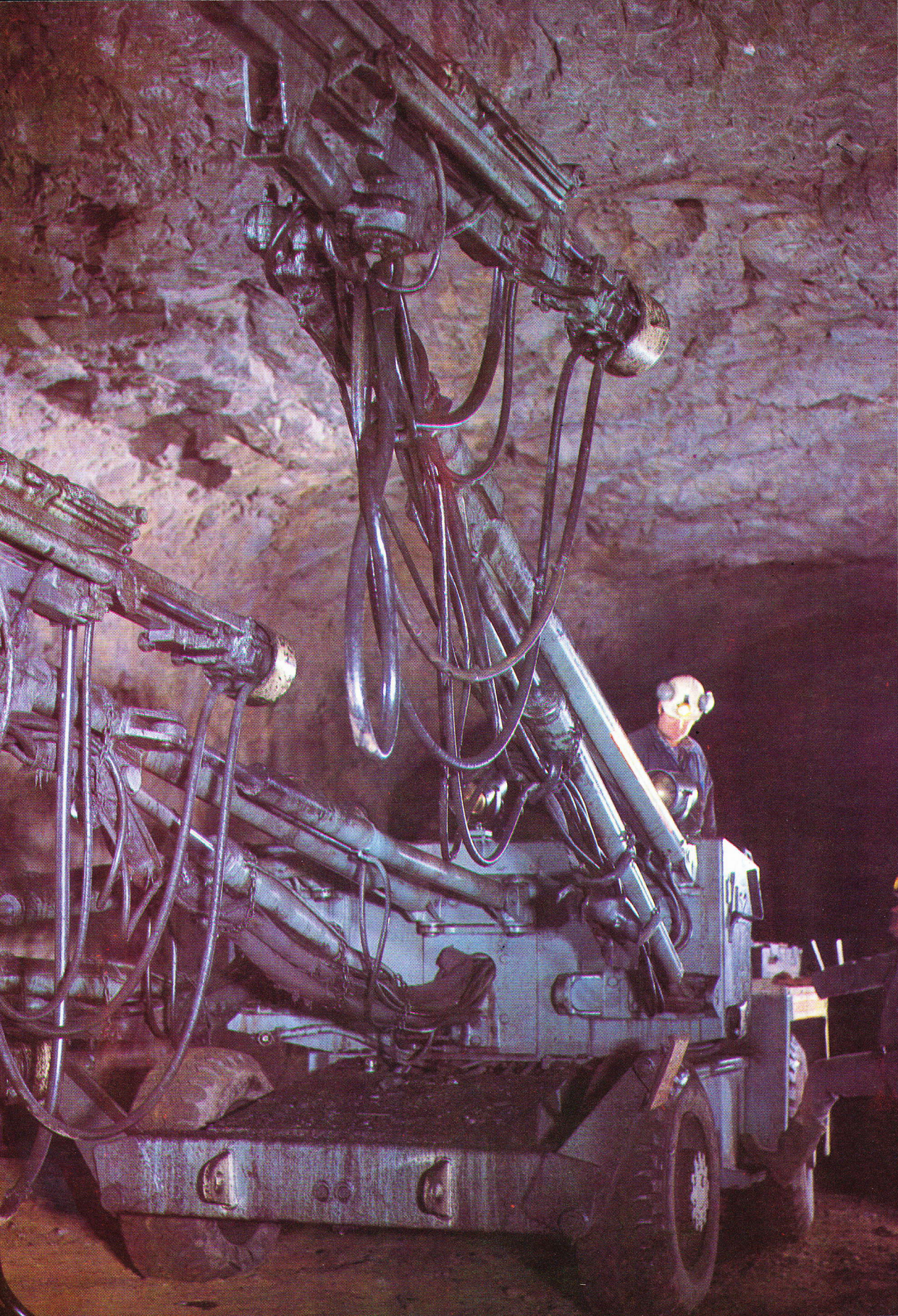


Waldheim Chalet

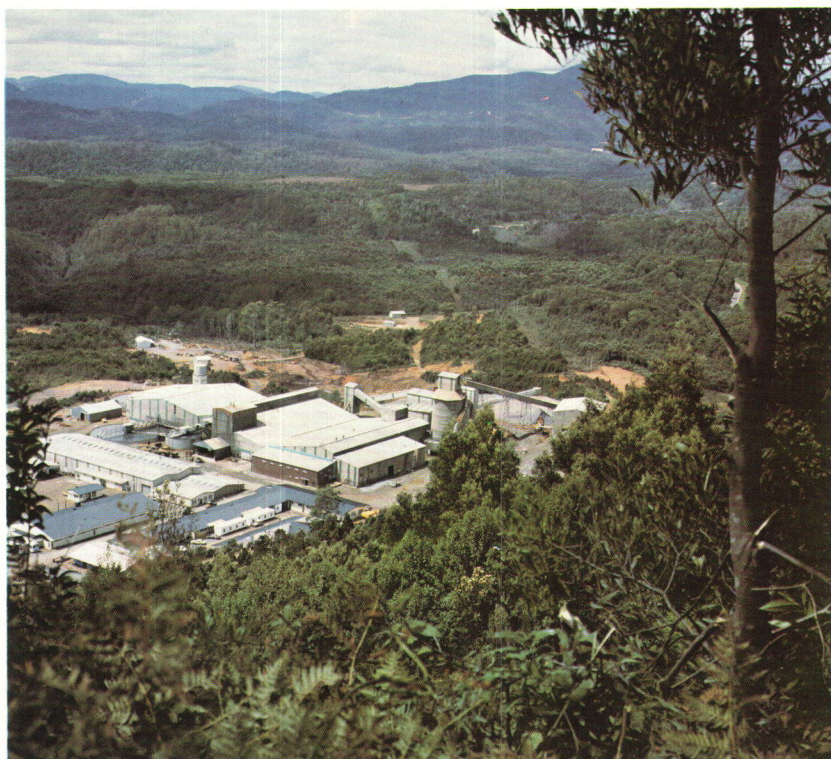


Russell Falls

[H. M. Moore]



*Renison Ltd.:—General view
of surface installations as at
October, 78 looking north*



*Opposite page:
Three Boom Jumbo Drilling Rig in an
Underground Development Mine*

*[Photos by D. L. Hopkins, courtesy of Renison
Ltd.]*

*Loading of tin concentrate
ready for shipment to Burnie
port*





The Nut, Stanley

[H. M. Moore]

Cradle Mt.



Tasmania, due to its terrain, has areas where television reception direct from the Mt Wellington or Mt Barrow transmitters is either difficult or impossible. To provide good reception in such areas, translator stations, which are low-powered stations receiving signals from a parent station and re-transmitting on a different frequency to areas with poor reception, have been installed as shown in the following table. Translator stations cannot broadcast directly.

The next table shows translator stations in operation and the areas served:

Television Translator Stations in Operation at 30 June 1978

Area served	Parent station		Local channel	
	National	Commercial	National	Commercial
Burnie.....	ABNT 3	TNT 9	(a) 4	10
Derby.....		TNT 9	..	11
Fingal Valley.....	ABNT 3	TNT 9	(b) 1	(c) 11
Lileah.....	ABNT 3	TNT 9	8	6
Maydena.....		TVT 6	..	8
Queenstown-Zeehan.....	ABT 2	TVT 6	4	8
Rosebery-Renison Bell.....	ABT 2	TVT 6	1	10
Savage River-Luina.....	ABNT 3	TNT 9	4	(d) 7
Smithton.....	ABNT 3	TNT 9	(a) 4	11
South Launceston.....	ABNT 3	TNT 9	1	11
St Helens.....	ABNT 3	TNT 9	0	(d) 7
St Marys.....	ABNT 3	TNT 9	(b) 1	(c) 11
Strahan.....	ABT 2	..	10	..
Strathgordon.....	ABT 2	TVT 6	5	8
Swansea-Bicheno.....	ABT 2	TVT 6	4	8
Taroona.....		TVT 6	..	8
Waratah.....	ABNT 3	TNT 9	2	11
Wynyard.....	ABNT 3	TNT 9	1	5A

(a) (b) (c) (d) A single translator serves both areas.

Radio Stations in Operation

The following table gives details of the radio stations in operation in Tasmania:

Radio Stations in Operation at 30 June 1978

Call sign	Classification	Location	Hours of service (weekly)
7ZL.....	National	Hobart	133-00
7ZR.....	National	Hobart	133-00
7NT.....	National	Launceston	133-00
7QN(a).....	National	Queenstown	133-00
7FG (a).....	National	Fingal Valley	133-00
7SH (a).....	National	St Helens	133-00
7HO.....	Commercial	Hobart	168-00
7HT.....	Commercial	Hobart	168-00
7AD.....	Commercial	Devonport	116-30
7BU.....	Commercial	Burnie	113-30
7EX.....	Commercial	Launceston	138-00
7LA.....	Commercial	Launceston	139-00
7QT.....	Commercial	Queenstown	77-00
7SD.....	Commercial	Scottsdale	116-30
7CAE (b).....	Non-profit	Hobart	60-00

(a) Transmits, in the main, programs originating from 7NT.

(b) F.M. station operated by the Tasmanian College of Advanced Education.

Tasmania's first F.M. (frequency modulated) station, 7CAE-FM Hobart, began regular broadcasting in February 1977 on a frequency of 92.1 MHz. A second FM station (7HFC-FM) operated by the Hope Foundation Communicators Inc., was expected to commence regular broadcasting in mid-1979.

Although there are areas of poor reception due to difficult terrain, most of Tasmania receives a satisfactory radio service from one or more of the above stations. In addition, the northern part of the State receives a service from some mainland stations. The structure and population distribution in the State has given rise to a regional pattern of radio stations with concentrations in Hobart and Launceston and outlying stations in the north-east, north-west and west.

Further References

ABS publications produced by the Tasmanian Office

Trade and Shipping, Tasmania (5401.6) (annual, 1975-76 issues released 30-9-77, 39pp.).
Motor Vehicle Registrations, Tasmania (9301.6) (monthly, August 1978 released 25-9-78, 5pp.).
Motor Vehicle Census, Tasmania (9302.6) (irregular, September 1976 released 22-12-77, 18pp.).
Road Traffic Accidents Involving Casualties, Tasmania (9401.6) (quarterly, June quarter 1978 released 20-9-78, 7pp.).
Road Traffic Accidents Involving Casualties, Tasmania (9402.6) (half yearly, December 1977 released 10-5-78, 9pp.).

ABS publications produced by the Canberra Office

Rail, Bus and Air Transport (9201.0) (annual, 1975-76 released 16-9-77, 32pp.).
Overseas and Coastal Shipping (9207.0) (annual, 1976-77 released 14-11-78, 21pp.).
Registration of New Motor Vehicles (Preliminary) (9301.0) (monthly, September 1978 released 24-10-78, 4pp.).
Motor Vehicle Registrations (9303.0) (quarterly, June quarter 1978 released 4-10-78, 24pp.).
Motor Vehicle Registrations (9304.0) (annual, 1977-78 released 12-10-78, 29pp.).
Road Accident Fatalities (9401.0) (monthly, August 1978 released 19-10-78, 2pp.).
Road Traffic Accidents Involving Casualties (9403.0) (quarterly, March quarter 1978 released 13-10-78, 20pp.).

Chapter 12

PRIVATE FINANCE

INSURANCE

General

Definitions

The following data on insurance are divided into life insurance and insurance other than life; i.e. fire, marine and general insurance. No distinction is made between insurance and assurance, the former term being used in all contexts.

Legislation

Section 51 of the Federal Constitution confers the necessary powers on the Federal Parliament to legislate with respect to 'insurance other than state insurance; also state insurance extending beyond the limits of the state concerned'. The principal Federal legislation affecting current insurance business is as follows:

Life Insurance Act 1945: This Act provides for uniform control throughout Australia of life insurance business other than business transacted by state government insurance offices, friendly societies and trade unions providing benefits for members of dependants. Also excluded is business in relation to superannuation benefits provided wholly by an organisation established by employers, employees or both.

Under the Act each company must maintain at least one office in each State or Territory in which it conducts life insurance business. Companies are also required to set up statutory funds in respect of their life insurance business in Australia and all amounts received in respect of this business must be paid to, and form part of, the assets of these funds. The assets of the statutory funds can only be used to meet liabilities or expenses relating to the life insurance business and, in certain circumstances, the payment of dividends to shareholders.

Insurance Act 1973: This act restricts the right to carry on insurance business to authorised companies and Lloyd's underwriters and makes arrangements aimed at ensuring that these are at all times financially sound. Insurance business carried on by the Federal Government, a state government or by a number of named government or semi-government authorities is exempt. The Act does not extend to life insurance business, registered medical or hospital benefits organisations and certain other bodies.

Life Insurance

Since 1947 returns lodged under the *Life Insurance Act 1945* have been used to compile life insurance statistics. In Tasmania, the Government Insurance Board transacts a limited form of life insurance only (in respect of home mortgage repayments of purchasers of Housing Department dwellings) and tables that follow refer to operations of enterprises exclusively in the private sector. The transactions in the next table are concerned with Tasmania as the 'State of issue' of the policies, not necessarily as the 'State of risk'.

Life Insurance Transactions (Excluding Annuities) (a)

Particulars	1973	1974	1975	1976	1977
ORDINARY BUSINESS					
New policies issued—					
Number	17 739	16 566	15 435	13 905	13 937
Sum insured	\$'000 150 152	174 487	195 419	219 732	250 754
Annual premiums	\$'000 2 795	2 882	3 024	2 913	3 258
Policies discontinued or reduced—					
Number	10 223	14 374	15 042	16 434	16 789
Sum insured	\$'000 56 328	66 968	82 450	101 813	117 586
Annual premiums	\$'000 1 263	1 586	1 768	2 170	2 333
INDUSTRIAL BUSINESS (b)					
New policies issued—					
Number	3 561	2 644	1 946	1 472	961
Sum insured	\$'000 6 771	6 067	5 271	3 500	2 740
Annual premiums	\$'000 212	193	170	123	97
Policies discontinued or reduced—					
Number	4 873	5 148	5 372	5 369	5 164
Sum insured	\$'000 4 141	4 505	5 177	4 715	5 051
Annual premiums	\$'000 136	152	184	165	189
SUPERANNUATION BUSINESS					
New policies issued—					
Number	1 970	2 635	3 032	3 118	2 933
Sum insured	\$'000 73 151	88 272	123 650	125 773	175 905
Annual premiums	\$'000 1 793	2 695	3 793	3 569	5 989
Policies discontinued or reduced—					
Number	1 498	1 629	1 843	1 995	1 979
Sum insured	\$'000 28 194	32 179	38 324	47 426	62 236
Annual premiums	\$'000 715	861	1 081	1 332	1 730
TOTAL BUSINESS					
New policies issued—					
Number	23 270	21 845	20 413	18 495	17 831
Sum insured	\$'000 230 072	268 828	324 340	349 007	429 402
Annual premiums	\$'000 4 800	5 766	6 986	6 605	9 343
Policies discontinued or reduced—					
Number	16 594	21 151	22 257	23 798	23 932
Sum insured	\$'000 88 664	103 652	125 951	153 952	184 873
Annual premiums	\$'000 2 117	2 600	3 030	3 663	4 252
NEW LOANS PAID OVER (EXCLUDING ADVANCES OF PREMIUMS)					
On mortgage of real estate	\$'000 2 984	3 509	2 983	4 120	3 861
On companies' policies	\$'000 1 533	2 432	1 863	1 949	2 363
On other securities	\$'000 41	365	178	212	196
Total	\$'000 4 560	6 307	5 027	6 282	6 420

(a) Refers to companies' balance dates between 1 January and 31 December of year shown.

(b) Industrial business refers, in the main, to policies on which the premiums are collected as regular instalments by agents on commission.

Fire, Marine and General Insurance

Information on insurance, other than life, is compiled from returns provided by insurance companies transacting fire, marine and general insurance business in Tasmania (including the Tasmanian Government Insurance Office). Statistics that follow relate to financial years of companies ending within the period shown and to policies issued in Tasmania and not necessarily to those for which the risk is situated in Tasmania.

Definitions

Premiums represent the full amount receivable in respect of policies issued and renewed

in the year, less returns, rebates and bonuses paid or credited to policy-holders during the year. They are not adjusted to provide for premiums unearned at the end of the year.

Claims include payments made during the year, *plus* estimated amount of outstanding claims at end of year, *less* estimated amount of outstanding claims at beginning of year.

Contributions to fire brigades, commission and agents' charges, and expenses of management are those amounts actually paid during the year.

Taxation represents payments made during the year and includes pay-roll tax, licence fees, etc. Stamp duty and income tax are included in this item up to 1973-74, but excluded from 1974-75.

Selected Revenue and Expenditure Items

The following table should not be construed as a profit and loss statement; selected revenue and expenditure items only have been used.

Fire, Marine and General Insurance
(£'000)

Particulars	1972-73	1973-74	1974-75	1975-76	1976-77
Premiums (less returns, rebates and bonuses)	30 825	34 958	44 762	51 199	72 152
Interest, dividends, rents	660	771	(a)	(a)	(a)
Total (selected revenue items)	31 485	35 729	44 762	51 199	72 152
Claims (less amounts recoverable)	18 249	23 507	29 979	29 552	42 010
Contributions to fire brigades	979	1 069	1 371	1 529	2 483
Commission and agents' charges	2 999	3 330	4 002	4 509	4 472
Expenses of management	6 364	6 875	8 102	8 100	11 844
Taxation	780	1 041	(b) 376	336	627
Total (selected expenditure items)	29 371	35 822	44 217 (b) (c)	44 238 (c)	61 420 (c)

(a) From 1974-75 figures for this item are available only for Australia as a whole due to a change in collection methods.

(b) Refer to definition of Taxation above. Figures from 1974-75 are not comparable with those for previous years.

(c) Includes other underwriting expenses of \$386 000 in 1974-75, \$212 000 in 1975-76 and \$16 000 in 1976-77.

Types of Insurance

The next table shows premiums and claims according to the class of insurance business transacted in 1976-77. ('Premiums' and 'Claims' have been compiled in accordance with the definitions introducing the section.)

Fire, Marine and General Insurance
Premiums and Claims for Each Type of Insurance, 1976-77
(\$'000)

Class of business	Premiums	Claims	Class of business	Premiums	Claims
Motor vehicle comprehensive			All risks/baggage	515	230
(a)	18 852	11 394	Plate glass	224	187
Employers' liability	19 550	12 769	Professional indemnity	78	315
Compulsory third party (b)	11 879	8 017	Livestock	112	63
Fire and sprinkler leakage	5 416	1 972	Contractors' all risks	287	(c)
Houseowners' and house- holders' comprehensive	6 319	3 683	Guarantee	35	5
Marine (hull and cargo)	2 889	941	Product liability	23	50
Personal accident	1 715	759	Fruit crop and hailstone	22	7
Loss of profits	890	392	Aviation	7	20
Public liability	1 201	384	Other	1 035	488
Burglary	604	153			
Boiler, engineering and machine breakdown	501	182			
			Total	72 152	42 010

(a) Includes motor cycles.

(b) Motor vehicles only. The Motor Accident Insurance Board accepted all rights, obligations and liabilities in respect of Compulsory Third Party Insurance from 1 October 1974.

(c) Confidential—included in 'Other'.

Ratio of Claims to Gross Premiums: The following table shows the ratio of claims to premiums for the more important classes of business over a three-year period:

Fire, Marine and General Insurance
Ratio of Claims to Premiums (a)
(Per Cent)

Class of business	1974-75	1975-76	1976-77
Motor vehicle comprehensive (including motor cycles)	72.4	62.0	60.4
Employers' liability	84.2	58.6	65.3
Compulsory third party (b)	73.5	81.0	67.5
Fire and sprinkler leakage	22.6	27.7	36.4
Houseowners' and householders' comprehensive	50.5	51.0	58.3
Marine (hull and cargo)	98.9	72.1	32.6
Personal accident	42.3	41.1	44.3
Loss of profits	19.7	20.9	44.0
Public liability	129.1	20.3	32.0
Burglary	30.3	23.3	25.3
Boiler, engineering and machine breakdown	79.0	51.7	36.3
All classes	66.9	57.7	58.2

(a) See beginning of section for definition of claims and premiums.

(b) Motor vehicles only.

BANKING AND EXCHANGE RATES

Types of Banks

General

Banks in Tasmania can be classified by ownership as follows: (i) Government—The Reserve Bank of Australia, the Commonwealth Development Bank of Australia, the Commonwealth Trading Bank of Australia and the Commonwealth Savings Bank; (ii) Private—the private trading banks and the private savings banks; and (iii) Trustee—The Savings Bank of Tasmania (previously the Hobart Savings Bank) and the Launceston Bank for Savings. The Agricultural Bank is *not* a bank for the purpose of these statistics.

For statistical purposes such a classification is not helpful since banks, both government and private, may be engaged in the same type of activity. Hence, the classification in use is one which groups banks according to their type of activity, not according to their ownership. The major banking statistics for the State are presented in two distinct series under the headings 'Trading Banks' and 'Savings Bank'.

Trading Banks

The following seven institutions in Tasmania are classified, for statistical purposes, as 'trading banks': Commonwealth Trading Bank of Australia; Australia and New Zealand Banking Group; Bank of New South Wales; The Commercial Bank of Australia Ltd; The Commercial Banking Company of Sydney Ltd; The National Bank of Australasia Ltd; and The Bank of Adelaide.

Savings Banks

In the 1950s, only three savings banks operated branches in Tasmania: Hobart Savings Bank (now The Savings Bank of Tasmania), Launceston Bank for Savings (both trustee savings banks) and the Commonwealth Savings Bank. The trustee savings banks date from early colonial days, the Launceston Bank opening in 1835, and the Hobart Bank in 1845.

In recent years, private trading banks have opened savings bank subsidiaries in the State, the current list of such banks being: Australian and New Zealand Savings Bank Ltd; The Bank of Adelaide Savings Bank Ltd; Bank of New South Wales Savings Bank Ltd; The Commercial Savings Bank of Australia Ltd; C.B.C. Savings Bank Ltd; and The National Savings Bank Ltd.

Savings banks also offer cheque facilities to customers; however, for statistical purposes their cheque operations are included in 'savings bank statistics'.

Transactions of Trading Banks

The accompanying tables show average deposits, advances and debits to customers' accounts by month for 1976-77 and summarise the principal statistics relating to all trading banks in Tasmania for a five-year period. The following definitions apply:

- (i) Deposits—a bank liabilities item. The figure is the average, for the year, of *balances* read at weekly intervals.
- (ii) Loans, advances and bills discounted, etc.—a bank assets item. The figure is the average, for the year, of *balances* read at weekly intervals.
- (iii) Debits to customers' accounts—mainly the total of all cheques drawn by customers during a given period. The figure is the average, for the year, of such weekly entries.

Transactions: All Trading Banks in Tasmania, 1976-77

Month	Average deposits (a)	Average advances, etc. (a) (b)	Average weekly debits to advances customers' accounts (c)
July	275 912	189 086	169 874
August	295 306	191 720	164 250
September	318 005	194 685	168 496
October	327 101	204 971	172 095
November	350 492	204 893	185 734
December	358 580	204 729	202 166
January	365 848	205 330	160 539
February	383 698	209 061	171 588
March	394 556	209 811	186 007
April	388 466	219 297	188 099
May	374 715	226 463	201 011
June	347 192	228 945	184 076
Weekly average for year	348 613	207 635	179 932

(a) The average, for the month or year, of *balances* read at weekly intervals.

(b) Loans, advances and bills discounted, etc.; excludes loans to authorised dealers in the short-term money market.

(c) Excludes debits to Federal and State Government accounts at Hobart branches. In addition to trading bank transactions, those of the Rural Credits Department of the Reserve Bank and the Commonwealth Development Bank are included in this item.

Transactions: All Trading Banks in Tasmania

Particulars	1972-73	1973-74	1974-75	1975-76	1976-77
NUMBER					
Branches open at 30 June	103	103	101	104	105
DEPOSITS, ADVANCES AND DEBITS TO CUSTOMERS' ACCOUNTS: WEEKLY AVERAGES (\$'000)					
Deposits (a)—					
Federal and State Governments	3 029	3 573	6 499	12 919	33 442
Other—					
Fixed	64 743	93 961	112 543	133 357	168 637
Current—Bearing interest	8 915	10 162	11 031	14 617	16 723
Not bearing interest	82 454	99 343	99 781	116 486	129 811
Total	159 141	207 040	229 851	277 377	348 613
Loans, advances and bills discounted (a)					
(b)	99 192	121 077	137 189	157 951	207 635
Debits to customers' accounts (c)	85 291	103 041	119 447	150 536	179 932

(a) (b) (c) See footnotes to the previous table.

The table below gives a classification of trading bank advances outstanding within Tasmania by type of borrower resident within Australia, and in total for non-residents of Australia.

Trading Banks: Classification of Advances Outstanding within Tasmania
(\$'000)

Type of advance	At second Wednesday in July			
	1974	1975	1976	1977
BORROWERS RESIDENT WITHIN AUSTRALIA				
Business advances—				
Agriculture, grazing and dairying—				
Sheep grazing	5 548	6 700	7 589	8 708
Dairying and pig raising	6 937	6 723	7 185	7 203
Other	10 829	13 189	14 738	16 346
Total	23 314	26 612	29 512	32 257
Manufacturing	30 846	24 728	29 207	28 208
Transport, storage and communication	3 023	3 420	4 289	4 316
Finance—				
Building and housing societies	468	425	624	390
Pastoral and finance companies	1 211	728	472	728
Hire purchase and other finance companies	1 041	1 117	916	1 293
Other	1 248	801	886	1 199
Total	3 968	3 071	2 898	3 610
Retail and wholesale trade	22 608	21 541	33 337	38 200
Building and construction	4 203	4 407	6 916	10 282
Other business	22 095	25 703	27 387	40 364
Unclassified	861	739	539	1 771
Total business advances	110 919	110 221	134 085	159 008
Advances to public authorities (excl. Federal and state governments)	537	1 159	1 372	983
Personal advances—				
Building or purchasing own home (individuals)	8 266	9 420	12 337	15 445
All other	23 643	25 223	39 933	57 223
Total personal advances	31 909	34 643	52 270	72 668
Advances to non-profit organisations	1 410	1 498	1 816	1 891
Total advances to resident borrowers	144 776	147 521	189 543	234 550
BORROWERS NON-RESIDENT WITHIN AUSTRALIA				
Total non-resident borrowers	35	23	6	25
TOTAL ADVANCES TO RESIDENT AND NON-RESIDENT BORROWERS				
Grand total	144 812	147 544	183 549	234 575

Interest Rates and Security Yields

The next table shows the interest rates available on fixed deposits, the interest yield from treasury notes and the yield from government securities:

Interest Rates and Security Yields
(Per Cent Per Annum)

Particulars	Rate			
	June 1974	June 1975	June 1976	June 1977
Trading banks (a)—				
Fixed deposits (less than \$50 000)—				
3 months and less than 6 months	6.75	8.00-9.00	7.00-8.25	7.75-8.25
6 months and less than 12 months	6.75	8.25-9.50	7.25-8.75	8.25-9.00
12 months and less than 18 months	7.50	8.25-9.50	7.25-8.75	} 8.25-9.00
18 months and less than 2 years	7.50	8.25-9.50	7.25-8.75	
2 years to 4 years	7.50	8.00-9.50	8.25-9.50	8.00-9.50
Fixed deposits (\$50 000 and over)—				
30 days to 4 years (b)	8.00	10.00	10.00	10.00
Federal Government securities yield—				
Non-rebateable bonds (c)—				
2 years	10.80	8.49	8.47	9.88
10 years	9.52	9.50	9.99	10.41
20 years	9.49	9.50	10.20	10.48
Treasury notes (issue yield)—				
13 week notes	10.75	7.81	6.98	8.60
26 week notes	10.76	8.01	7.25	9.12

(a) Maximum rates for June 1974.

(b) Subject to this maximum, actual rates are a matter for negotiation between banks and their customers.

(c) Yields shown are average for week centred on last Wednesday of month and exclude effect of brokerage.

Savings Banks

The following table summarises the principal statistics relating to savings banks in Tasmania. Deposits are compiled on a basis different from that used in the case of trading banks. 'Deposits lodged' is the total inflow of deposits during the year, and 'depositors' balances' is a single liability reading taken at the end of the year.

The number of operative accounts excludes school bank accounts and small inoperative accounts. The other items in the table relating to depositors' balances, etc., relate to all accounts including school bank accounts and small inoperative accounts.

All Savings Banks

Particulars	1972-73	1973-74	1974-75	1975-76	1976-77
Branches open (a)	no. 155	155	153	159	162
Operative accounts (a)	'000 529	561	591	606	618
Deposits lodged	\$'000 419 885	542 651	707 421	797 315	921 919
Interest added	\$'000 10 469	13 371	17 085	20 878	23 662
Excess of deposits over withdrawals	\$'000 35 660	25 677	37 213	27 412	22 853
Depositors' balances (a)	\$'000 288 986	328 029	382 326	430 618	477 134
Per head of population—					
Depositors' balances (a)	\$ 729	820	944	1 057	1 164

(a) At end of year.

The next table gives details of housing finance transactions by savings banks in Tasmania. Figures for this activity are not available for years prior to 1969-70.

Savings Banks: Housing Finance Transactions (a)

Period	Loans approved to individuals for—						Cancellation of loans previously approved to individuals for housing	
	Construction or purchases of new dwellings		Purchases of established dwellings		Alterations and additions	Total		
	Number (b)	Amount (c)	Number (b)	Amount (c)	Amount	Amount	Number	Amount
		\$'000		\$'000	\$'000	\$'000		\$'000
1971-72	630	5 718	1 580	12 171	409	18 298	125	999
1972-73	776	7 953	2 037	18 108	569	26 630	135	1 350
1973-74	860	10 534	1 782	18 422	753	29 709	140	1 314
1974-75	689	9 695	2 291	28 394	957	39 046	202	2 302
1975-76	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>	187	2 637
1976-77	768	13 258	2 131	36 974	2 213	52 445	162	2 385

(a) The statistics prior to 1975-76 are not strictly comparable with those for later years. The former categories 'Dwellings not previously occupied' and 'Dwellings previously occupied' have been defined more precisely and are replaced by the categories 'Construction or purchases of new dwellings' and 'Purchases of established dwellings', respectively. Also, loans approved for alterations and additions estimated to cost \$10 000 or more are included in the category 'Alterations and additions', whereas previously such loans were included in the categories 'Previously occupied' and 'Not previously occupied'. Total figures for 1975-76 are unavailable as the changes were implemented in October of that year.

(b) Number of loans for dwelling units approved for first mortgage finance only.

(c) Includes second mortgage finance to complete original purchase or construction.

At 30 June 1977, the balances outstanding on housing loans made by savings banks to individuals and to building societies were \$164 520 000 and \$1 781 000, respectively.

Interest Rates

The next table shows the maximum rates of interest paid to depositors or charged to borrowers with home mortgages by The Savings Bank of Tasmania. Interest rates paid to depositors or charged to borrowers with home mortgages by the Launceston Bank for Savings, the Commonwealth Savings Bank and the savings bank subsidiaries of the private trading banks, may vary marginally from the rates shown in this table.

The Savings Bank of Tasmania: Maximum Interest Rates (a)
(Per Cent Per Annum)

Date of change in rate	On savings accounts (b)	On home mortgages	Date of change in rate	On savings accounts (b)	On home mortgages
March 1973	(c) 4.00	7.00	April 1975	(e) 4.00	(f) 9.50
October 1973	(c) 4.00	(d) 8.00	February 1976	(e) 4.00	(g) 10.50
August 1974	(c) 4.00	(d) 10.00	August 1977	(e) 4.00	(g) 10.00

(a) Operative from first day of month shown.

(b) From February 1966, fixed deposit rates have been 0.25 per cent greater than trading banks rates.

(c) Effective on accounts to \$4 000.

(d) Effective for loans to \$12 500.

(e) Effective on accounts to \$4 000. From \$4 001 to \$20 000 the interest rate was 6.25 per cent.

(f) Effective rate for loans to \$12 500. For loans from \$12 501 to \$20 000 the rate was 11.0 per cent. For loans over \$20 000 the rate was 11.5 per cent.

(g) Effective for all loans to \$100 000.

Overseas Exchange Rates

The next table shows average overseas exchange rates operative for recent periods:

Exchange Rates (a): Average for Period Shown, Overseas Currency Relative to Australian Dollar

Country	Unit of overseas currency	1973-74	1974-75	1975-76	1976-77
Belgium (b)	Francs	57.17	50.69	50.11	42.92
Canada (c)	Dollars	1.44	1.35	1.26	1.16
China—excl. Taiwan Province	Renminbi (Yuan)	2.87	(d)	(d)	(d)
France (b)	Francs	6.31	6.04	5.62	5.67
Germany, Federal Republic of	Deutsche marks	3.71	3.34	3.21	2.78
Hong Kong	Dollars	7.40	6.68	6.25	5.45
India	Rupees	11.48	10.85	11.14	10.12
Italy (b)	Lire	892	878	925	990
Japan	Yen	404.52	401.70	376.06	327.91
Malaysia	Dollars	3.50	(d)	(d)	(d)
Netherlands	Guilders	3.93	3.44	3.34	2.91
New Zealand	Dollars	1.031	1.014	1.191	1.144
Pakistan	Rupees	(d)	(d)	(d)	11.13
Singapore	Dollars	3.50	3.18	3.09	2.71
South Africa	Rands	0.977	0.925	1.038	0.990
Sri Lanka	Rupees	9.56	9.01	9.79	9.48
Switzerland	Francs	4.47	3.66	3.25	2.85
U.S.A.	Dollars	1.47	1.37	1.26	1.15
U.S.S.R. (c)	Roubles	1.1	(d)	(d)	(d)
United Kingdom	Pound stg	0.614	0.581	0.630	0.670

(a) Average telegraphic transfer selling rates at Sydney.

(b) Two rates were quoted for France from 20.9.71 to 22.3.74, Italy from 1.2.73 to 22.3.74 and Belgium from 20.9.71. The rate shown for these periods is the financial rate used for trade transactions.

(c) Derived from foreign exchange rates quoted against pound stg in London and against pound stg in Sydney.

(d) Daily quotations available on application to any trading bank.

INSTALMENT CREDIT AND OTHER FINANCING

Finance Companies

Finance Companies: In these statistics finance companies are incorporated companies mainly engaged in providing, to the general public, the following credit facilities: (i) instalment credit for retail sales; (ii) personal loans; (iii) wholesale finance; (iv) factoring; (v) other consumer and commercial loans; (vi) financial leasing of business equipment and plant; and (vii) bills of exchange.

The definitions associated with the statistics are set out in considerable detail in the bulletin *Finance Companies Transactions* (Cat. No. 5615.0) published by the Canberra Office of the Bureau.

Comparability: From 1 July 1973: (i) the definition of a 'Finance Company' was altered to include leasing and bill of exchange transactions as qualifying assets; (ii) companies mainly engaged in financing the operations of related companies by directly writing agreements with the general public were included in these statistics; and (iii) the item 'Instalment Credit for Retail Sales' has been redefined to exclude details of financing of 'producer' type goods such as plant and machinery tractors, earth moving equipment, business machines and motor vehicles other than cars and station wagons.

Private Finance

Finance Companies: Transactions (a)
(\$m)

Year	Instalment credit for retail sales	Wholesale finance	Other consumer and commercial loans		Total all contracts
			Contracts including charges (b)	Contracts excluding charges (c)	
AMOUNT FINANCED					
1972-73	38.0	43.1	5.0		86.1
1973-74	36.0	52.3	14.4		102.8
1974-75	44.8	65.7	12.8		123.3
1975-76	52.9	79.7	21.1		153.7
1976-77	62.8	114.5	49.5		226.8
COLLECTIONS AND OTHER LIQUIDATIONS OF BALANCES					
1972-73	47.2	43.8	1.9	4.2	97.0
1973-74	43.1	52.1	12.3	3.2	110.5
1974-75	46.7	64.2	14.6	3.2	128.8
1975-76	61.1	77.1	14.8	4.4	157.4
1976-77	75.7	110.0	24.4	10.2	220.3
BALANCES OUTSTANDING AT END OF YEAR					
1972-73	57.3	5.8	2.9	4.5	70.5
1973-74	52.0	7.0	16.4	5.7	81.1
1974-75	64.2	8.2	18.0	6.4	96.8
1975-76	78.8	12.4	23.7	9.6	124.6
1976-77	96.5	19.5	43.7	20.6	180.3

(a) See explanatory notes preceding table for explanation of changes from 1973-74.

(b) Includes details of personal loans.

(c) Includes factoring.

The value of capital goods (business equipment and plant) leased by finance companies, over a five-year period, is shown in the table below:

Finance Companies: Business Equipment and Plant on Lease
(\$m)

Particulars	1972-73	1973-74 (a)	1974-75	1975-76	1976-77
Value of goods leased during period	7.5	14.5	14.8	18.1	25.6
Balances outstanding at end of year	15.1	21.3	27.3	35.2	46.1

(a) Change in definition of a Finance Company; see earlier section 'Comparability'.

In the following table the amount financed in respect of instalment credit for retail sales agreements (a single item in previous tables) is further classified by type of commodity.

Finance Companies: Instalment Credit for Retail Sales
(\$m)

Year	Amount financed during year					Cash collections and other liquidations during year	Balances outstanding at end of year
	Motor vehicles, etc.		Plant and machinery	Household and personal goods	Total		
	New	Used					
1972-73	<u>11.9</u>	<u>19.3</u>	<u>3.8</u>	<u>3.0</u>	<u>38.0</u>	<u>47.2</u>	<u>57.3</u>
1973-74 (a)	(b) 32.6	..	..	3.4	36.0	43.1	52.0
1974-75	(b) 40.7	..	..	4.1	44.8	46.7	64.2
1975-76	(b) 46.1	..	..	6.9	52.9	61.1	78.8
1976-77	(b) 54.7	..	..	7.5	62.2	75.7	95.5

(a) See earlier section 'Comparability'.

(b) Not available for separate publication.

Instalment Credit for Retail Sales in Tasmania

The collection of data on instalment credit transactions began as a series dealing simply with the hire purchase operations of non-retail finance businesses. The series was then expanded, firstly to cover the hire purchase operations of retail businesses and, secondly, to introduce a concept of instalment credit considerably broader than hire purchase. A further stage in development was reached with a redefinition of the term 'instalment credit' and a change in the classification of businesses which operate instalment credit schemes from 'Retail Businesses' and 'Non-Retail Finance Businesses' to 'Finance Companies' and 'Other Businesses'. These changes apply to statistics for 1973-74 and later years.

Definitions

The statistics cover operations of all types of instalment credit schemes which relate primarily to the financing of retail sales of goods, whether the credit is advanced by finance companies or other businesses. In general, the item 'instalment credit' is defined as relating to schemes in which repayment is made by regular pre-determined instalments. Types of schemes covered include hire purchase, time payment, budget account and personal loan schemes which relate primarily to financing of retail sales of goods. The term 'retail sales' relates only to retail sales covered by the censuses of retail establishments; from July 1973, other sales of goods to final purchasers (e.g. plant and equipment) are excluded.

Figures for amounts financed exclude interest, hiring charges, insurance, etc. Figures for balances outstanding and collections and other liquidations include these charges. Details are not available of these charges or of other items (e.g. rebates allowed for early payment, late payment charges and bad debts written off) which affect the reconciliation of the three main instalment credit series: amount financed, collections and other liquidations, and balances outstanding.

Statistics of amounts financed are classified by type of goods, defined as follows: (i) motor vehicles, etc.—new and used motor cars and motor cycles, boats, caravans, trailers, and motor parts and accessories; and (ii) household and personal goods—furniture, furnishings and floor coverings, domestic refrigerators, electrical goods, radios, televisions, musical instruments, bicycles, motor mowers, clothing, etc. The category 'plant and machinery' has been discontinued from 1 July 1973 and the category 'motor vehicles, etc.' now excludes commercial type vehicles.

Instalment Credit for Retail Sales (a)
(Hire Purchase and other Instalment Credit)
(\$'000)

Year	Amount financed during period (b)			Balances outstanding at end of at end period (c)
	Motor vehicles, etc. (d)	Household and personal goods	Total all goods	
FINANCED BY FINANCE COMPANIES				
1973-74	32 555	3 427	35 982	52 032
1974-75	40 712	4 068	44 780	64 186
1975-76	46 054	6 872	52 926	78 826
1976-77	54 738	7 465	62 203	95 463
FINANCED BY OTHER BUSINESSES				
1973-74	457	5 489	5 946	5 621
1974-75	371	5 753	6 124	4 352
1975-76	282	5 752	6 034	4 371
1976-77	174	5 951	6 125	4 137
FINANCED BY ALL BUSINESSES				
1973-74	33 012	8 916	41 928	57 653
1974-75	41 083	9 821	50 904	68 538
1975-76	46 336	12 624	58 960	83 197
1976-77	54 912	13 416	68 328	99 600

(a) Includes time payment, budget account, and personal loan schemes relating primarily to the financing of retail sales.

(b) Excludes hiring charges, interest and insurance.

(c) Includes hiring charges, interest and insurance.

(d) Types of goods included are defined under 'Definitions' preceding the table.

OTHER PRIVATE FINANCE

Friendly Societies

Scope

The details that follow refer to 'ordinary' societies, not to 'special' societies. Ordinary societies are those which provide customary sick and funeral benefits and are subject to actuarial valuation. Special societies restrict their membership to employees of industrial parent organisations and are not subject to actuarial valuation.

Friendly Health Services (F.H.S.): This organisation was originally established to administer medical and hospital benefit funds to which members of existing societies could contribute; funds, membership and activities of this description are excluded from statistics of ordinary friendly society activities. F.H.S. later extended its scope to 'ordinary' society activities. Details of the latter only are included in friendly society statistics.

Membership

Friendly societies were a form of social organisation to help members meet the costs of sickness, burial, etc. at a time when government social services were either meagre or non-existent. Membership reached a maximum (over 22 000 in male lodges) in the pre-depression years but has since steadily declined. From the 1950s, there has been rapid development of various government-encouraged insurance schemes to assist families with hospital and other expenses associated with sickness; such schemes have evolved, in general, outside the framework of the friendly society movement. As there is no uniform accounting period for these societies, details are in respect of membership as at the end of accounting periods ending during the years shown.

With F.H.S. excluded from consideration, it may be seen that: (i) a decline in membership of other ordinary societies has continued (from 6 816 members in 1962 to 2 546 in 1976); (ii) the average age of members has continued to increase (from 36.7 years in 1920 to 67.5 in 1976).

In the following table male and female members of the F.H.S. Sickness and Assurance Fund and Whole of Life and Endowment Fund have been included.

Friendly Society Membership and Number Who Received Sick Pay, 1976

Particulars	Membership details					Members who received sick pay
	Financial members	Total membership (a)	Average age of members	Admissions	Departures (b)	
	no.	no.	years	no.	no.	no.
All societies (excl. Friendly Health Services)—						
Males	2 465	2 490	67.4	5	144	227
Females	54	56	70.3	—	2	2
Total	2 519	2 546	67.5	5	146	229
Friendly Health Services	412	412	35.1	—	31	70
Total all societies	2 931	2 958	63.0	5	177	299

(a) Includes financial members but not honorary members.

(b) Includes deaths.

The figures in the next table, which excludes details for F.H.S., show the decline in membership of other ordinary societies:

Societies, Lodges and Membership (a)
(Number)

Particulars	1971	1972	1973	1974	1975	1976
Societies	8	8	8	8	8	7
Lodges—Male	103	102	100	(b) 51	47	35
Female	6	5	5	7	7	7
Benefit members	3 931	3 726	3 509	3 275	3 108	2 546
Financial members	3 877	3 666	3 461	3 233	3 090	2 519

(a) Friendly Health Services excluded.

(b) Revised method of calculation. Previously some amalgamated branches were double-counted.

Revenue and Expenditure

The following tables show the net revenue and expenditure of friendly societies (excluding inter-fund transfers and transfers between districts and lodges) for the accounting years which ended in the years shown.

Friendly Societies (a): Net Revenue and Expenditure 1976
(\$)

Revenue			Expenditure		
Particulars	Total	Per financial member	Particulars	Total	Per financial member
Members' contributions (b)	61 109	20.85	Medical attendance and medicine	793	0.27
Interest, rent and dividends	112 902	38.52	Sick Pay	20 462	6.98
All other income	32 660	11.14	Funeral benefits	39 060	13.33
			Administration	39 437	13.45
			Endowment benefits	5 130	1.75
			Other	35 133	11.99
Total	206 671	70.51	Total	140 015	47.77

(a) Includes Friendly Health Services.

(b) Includes levies.

Friendly Societies (a): Receipts, Expenditure and Accumulated Funds
(\$'000)

Year	Net receipts (b)		Net expenditure (b)				Accumulated funds r
	Contributions and levies	Total (c)	Sick pay	Funeral benefits	Other (d)	Total	
1972	66	175	23	47	90	160	1 460
1973	64	176	25	51	116	192	1 445
1974	56	173	24	42	73	139	1 479
1975	47	169	16	33	72	121	1 527
1976	61	207	20	39	81	140	1 435 (e)

(a) Includes Friendly Health Services.

(b) Excludes inter-fund transfers and transfers between branches within societies.

(c) Comprises: (i) income from investments; (ii) grants received by Friendly Health Services from the ordinary societies; and (iii) other revenue items not specified in the table.

(d) Includes administration and medical attention expenses and endowment benefits paid by societies to members.

(e) Does not reconcile with previous year due to dissolution and distribution of funds of I.O.O.F.M.U. Cornwall district.

Registered Building Societies

Permanent Societies: These societies are both savings and deposit-receiving institutions which advance funds for home building or purchase against the security of first mortgages. Those who invest by taking shares or by making deposits are in a separate category from those who borrow to build or buy a home. The following table summarises the transactions of permanent building societies:

Permanent Building Societies (a)

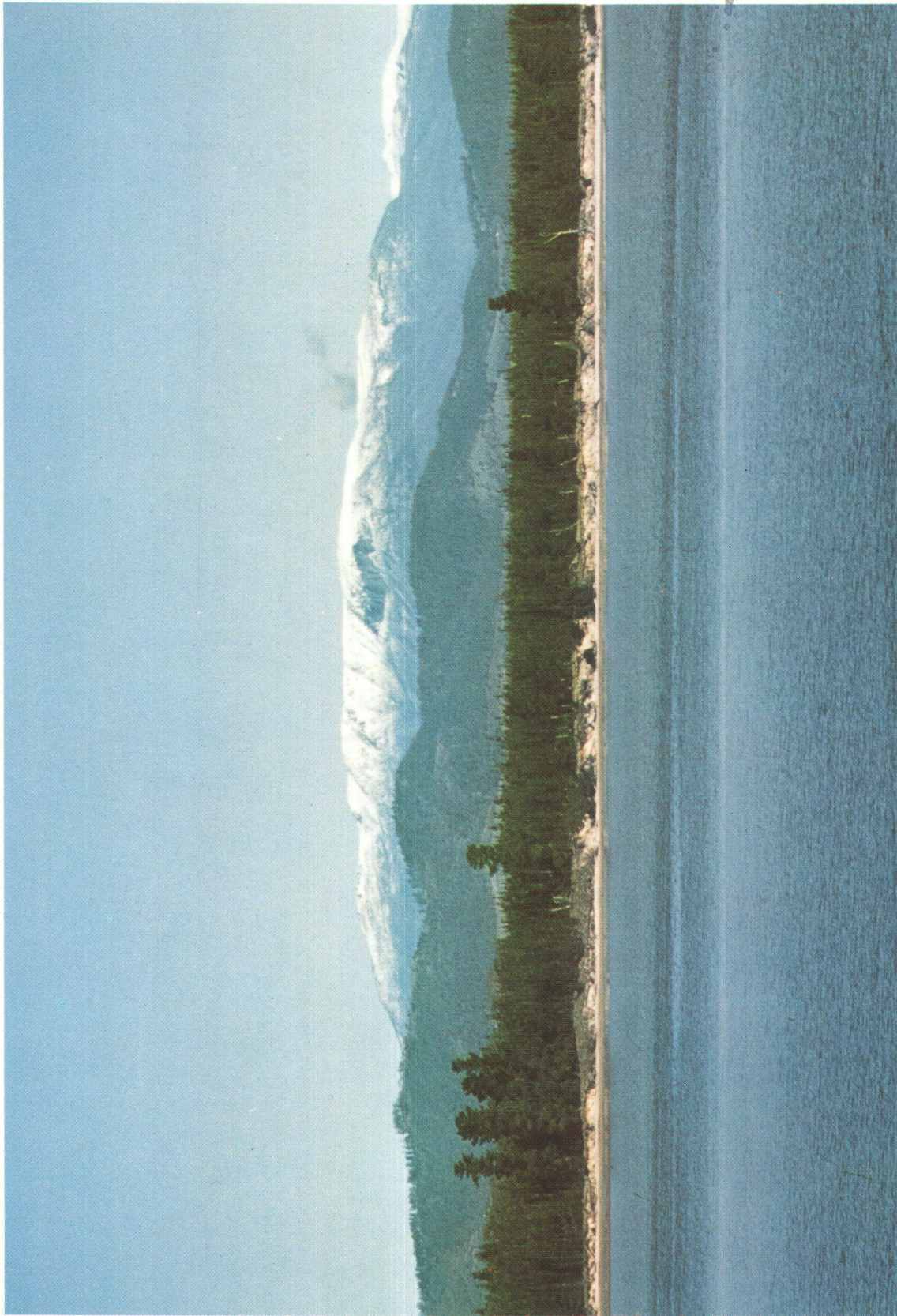
Particulars	1972-73	1973-74	1974-75	1975-76	1976-77
Operating societies	no. 6	no. 5	no. 5	no. 5	no. 5
Investing shareholders	15 765	26 936	35 971	n.p.	n.p.
Borrowers	7 514	7 124	6 795	n.p.	n.p.
	\$'000	\$'000	\$'000	\$'000	\$'000
Loans—Advanced	18 777	17 849	17 145	n.p.	n.p.
Repaid	7 758	10 144	10 803	n.p.	n.p.
Deposits—Received (b)	52 625	54 629	71 817	n.p.	n.p.
Withdrawn	44 491	61 074	64 965	n.p.	n.p.
Liabilities—					
Paid-up capital and subscriptions	31 169	40 379	55 782	n.p.	n.p.
Accumulated profits, reserves	1 363	1 490	1 581	2 043	2 406
Deposits	30 763	24 318	30 002	40 854	38 135
Other	1 613	2 401	2 151	n.p.	n.p.
Total	64 907	68 589	89 517	117 602	137 726
Assets—					
Loans on mortgage	50 676	58 381	64 723	86 805	104 803
Land and buildings	1 240	1 440	1 781	2 532	2 671
Government securities	4 003	4 149	3 884	7 093	29 519
Other investments	8 508	3 954	18 086	19 908	
Cash and current deposits	100	129	180	350	143
Other	380	536	863	914	590
Total	64 907	68 589	89 517	117 602	137 726

(a) As there is no uniform accounting period for these societies, financial details are in respect of accounting years ending during the years shown; details relating to the number of shareholders, etc. are in respect of numbers at the end of accounting period ending during the year shown.

(b) Includes interest credited to depositors' accounts.

Co-operative (Terminating) Societies

Terminating Societies are societies which, by their rules, are to terminate at a fixed date or when a result specified in their rules is attained. Societies issue members one class of share and require equated monthly instalments towards share capital from members; when a member borrows to build (and only a member may borrow) he is required to pay in addition equated monthly instalments, such addition constituting interest only. The regular instalments in respect of share capital are calculated to amount, with interest to the nominal amount of the member's shares over the life of the society (say 26 or 30 years). If the member takes out shares with a nominal value of \$20 000 then his borrowing ceiling is set at \$20 000—in other words the member takes out, in nominal share capital, the amount which he wishes to borrow for home-building. In effect, the member is contributing to a sinking fund for the liquidation of his loan. The terminating societies are termed 'co-operative'.



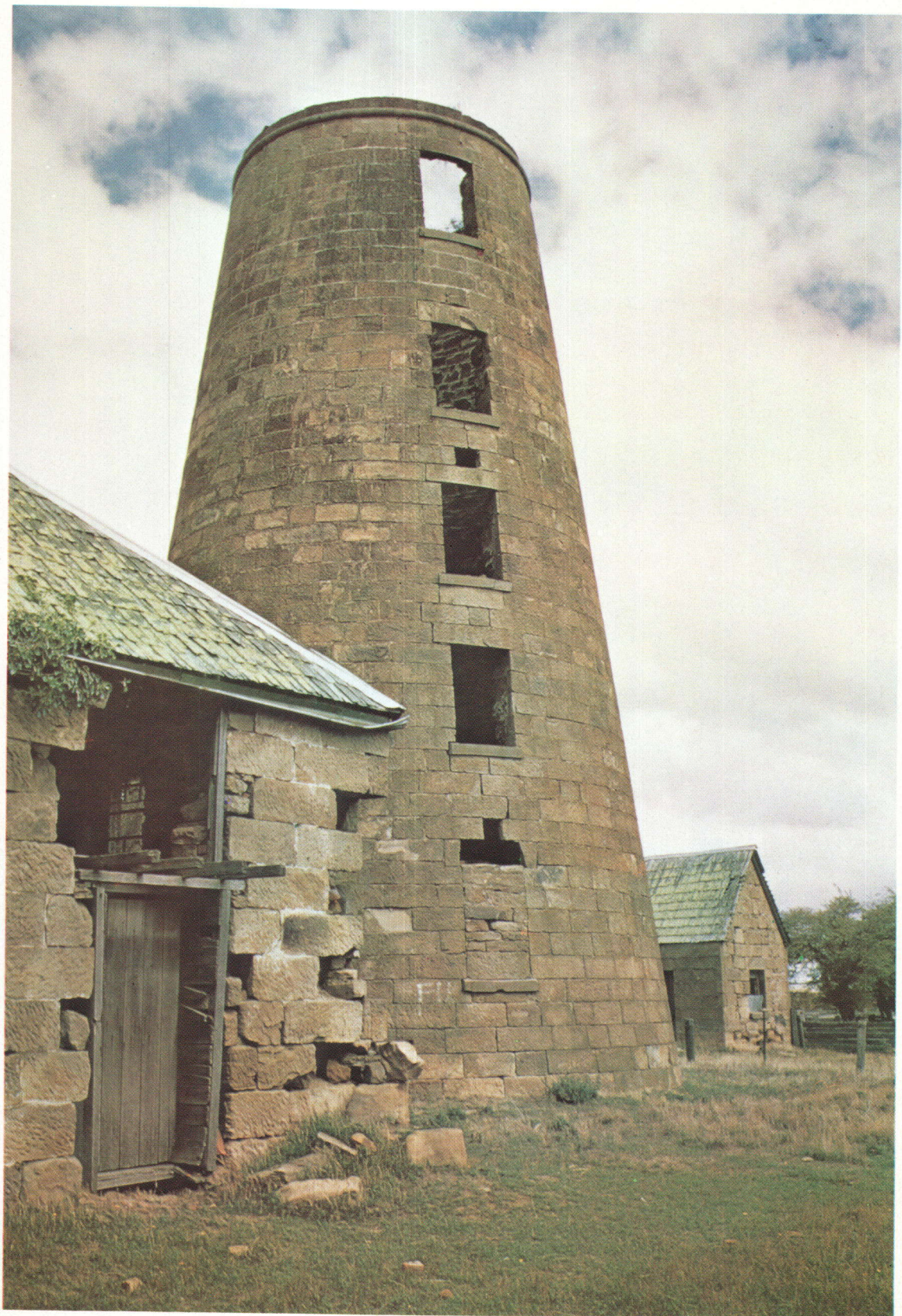
Mt. Wellington from Lewisham

[H. M. Moore]



Weldborough Pass

[H. M. Moore]



Study in Stone, the Old Mill

[H. M. Moore]



McPartlan Pass

[H. M. Moore]

Gorge in Flood



The maximum limit of an individual loan has been increased progressively from \$8 000 (prior to August 1969) to \$22 500 (from July 1976). Societies registered prior to 1 July 1976 were bound by previous limits; societies registered after 1 July 1976 may advance up to \$22 500 to each borrower.

The following table summarises the transactions of the co-operative housing societies operating in Tasmania:

Co-operative Housing Societies (a)

Particulars	1972-73	1973-74	1974-75	1975-76	1976-77
	no.	no.	no.	no.	no.
Operative societies.....	103	112	116	120	122
Shareholders.....	2 212	2 259	2 504	2 671	n.a.
Income—	\$'000	\$'000	\$'000	\$'000	\$'000
Interest on Loans.....	642	677	811	n.a.	994
Other interest income.....	8	11	13	n.a.	16
Other income.....	117	136	197	n.a.	185
Total.....	767	823	1 021	n.a.	1 195
Expenditure—					
Interest paid.....	566	595	716	n.a.	1 001
Management expenses.....	89	92	120	n.a.	110
Other expenses.....	23	39	29	n.a.	32
Total.....	679	727	865	n.a.	1 143
Liabilities—					
Share subscriptions.....	1 200	1 257	1 379	2 554	(c) 375
Reserves.....	604	698	876		
Loans due to—Government.....	7 761	8 297	10 960	12 250	10 178
Other lenders (b).....	2 658	2 481	2 428	2 321	{ 5 005
Other.....	193	185	193		
Total.....	12 415	12 917	15 836	17 125	15 654
Assets—					
Loans on mortgage.....	12 109	12 627	15 522	16 763	(d) 15 238
Other.....	306	290	314	362	416
Total.....	12 415	12 917	15 836	17 125	15 654

(a) As there is no uniform accounting period for these societies, financial details are in respect of accounting years ending during the years shown; details relating to the number of shareholders, etc. are in respect of numbers at the end of accounting periods ending during the years shown.

(b) Includes bank overdrafts for day-to-day running of societies.

(c) For societies operating on an actuarial basis members' subscriptions have been offset against 'Amounting owing on loans'.

(d) Net of members' subscriptions for societies operating on an actuarial basis.

Co-operative Societies

The next table summarises the financial transactions of societies registered under Tasmanian law as co-operative industrial societies; excluded are co-operative credit societies which are dealt with in a subsequent section. The activities of co-operative societies include processing of primary products, fish and meat marketing, and wholesaling groceries; profits are distributed among members.

Co-operative Societies (a)

Particulars	1972-73	1973-74	1974-75	1975-76	1976-77
Societies	no. 15	no. 15	no. 18	no. 20	no. 17
Shareholders	7 047	7 186	(b) 5 364	5 851	(c) 2 023
Sales	\$'000 11 918	\$'000 10 638	\$'000 11 523	\$'000 13 424	\$'000 18 987
Less cost of goods sold	10 401	9 229	9 773	r 11 148	16 434
Trading profit	1 517	1 409	1 749	r 2 276	2 552
Add non-operating receipts (d)	474	488	293	229	185
Less expenses—					
Wages and salaries	559	502	681	708	755
Interest	142	117	132	204	93
Administration	313	307	300	379	327
Other	798	780	1 072	1 358	1 238
Net surplus	178	192	-143	r -144	325
Dividends paid	26	71	104	82	87

(a) As there is no uniform accounting period for these societies, financial details are in respect of accounting years ending during the years shown; details relating to the number of shareholders, etc. are in respect of numbers at the end of accounting periods ending during the years shown.

(b) Decrease in membership due to one large society going into liquidation during the year.

(c) Decrease in membership due to one large society being incorporated on 30 June 1976.

(d) Commissions, discounts, services, etc.

Co-operative Societies: Assets and Liabilities at End of Year (a)
(\$'000)

Particulars	1972-73	1973-74	1974-75	1975-76	1976-77
Liabilities—					
Paid-up capital	1 410	1 425	1 516	1 826	744
Accumulated profits	907	512	285	258	1 117
Reserve funds	420	966	1 042	1 495	629
Loans and bank overdraft	1 633	1 501	2 067	3 342	1 420
Sundry creditors	1 319	1 467	1 359	1 483	1 780
Other	342	333	1 359	1 654	1 212
Total	6 032	6 203	7 627	10 059	6 902
Assets—					
Fixed	2 067	2 227	2 369	3 629	2 433
Stock on hand	944	922	2 176	2 591	1 921
Sundry debtors	1 484	1 253	1 141	1 498	1 023
Investments and loans	1 131	1 305	1 256	1 590	565
Other	407	496	684	751	960
Total	6 032	6 203	7 627	10 059	6 902

(a) As there is no uniform accounting period for these societies, details are in respect of the end of accounting periods ending during the years shown.

Co-operative Credit Societies

The co-operative credit societies (credit unions) are registered under the *Co-operative Industrial Societies Act 1928*. Most credit unions have been established by trade unions (e.g. those serving teachers, hospital employees, etc.) and by church groups. Members contribute capital by taking out shares and making deposits. The aim of the societies is to make loans to members at low rates of interest.

The following table shows the societies' annual transactions:

Co-operative Credit Societies (a)

Particulars	1972-73	1973-74	1974-75	1975-76	1976-77
	no.	no.	no.	no.	no.
Operating societies	27	27	23	23	22
Shareholders	22 918	25 508	24 379	28 604	30 683
	\$'000	\$'000	\$'000	\$'000	\$'000
Loans—Advanced	(b) 7 664	(a) 7 795	9 400	14 181	18 250
Repaid	(b) 5 284	(a) 6 370	7 539	10 095	12 224
Deposits—Received (c)	(b) 12 780	(a) 13 966	18 334	26 327	38 358
Withdrawn	(b) 10 397	(a) 12 419	15 684	22 485	32 321
Liabilities (at end of period)—					
Paid-up capital	195	217	219	248	282
Reserves, accumulated profits	72	24	17	271	613
Deposits	10 615	12 161	(d) 13 749	18 655	24 692
Other	500	549	317	695	746
Total	11 382	12 952	14 302	19 869	26 333
Assets (at end of period)—					
Loans	10 442	11 868	(d) 12 815	18 039	24 013
Cash and current deposits	366	285	586	1 018	1 449
Other (d)	574	800	902	811	871
Total	11 382	12 952	14 302	19 869	26 333

(a) As there is no uniform accounting period for these societies, financial details are in respect of accounting years ending during the years shown; details relating to the number of shareholders, etc. are in respect of numbers at the end of accounting period ending during the years shown.

(b) Partially estimated.

(c) Includes interest credited.

(d) Does not reconcile with data for previous year due to changed collection method.

(e) Includes investments and fixed assets.

Pension and Superannuation Schemes

Private Schemes

Surveys on an Australia-wide basis have revealed superannuation and/or retiring allowance schemes for employees in the private sector as follows: (i) schemes operated through life insurance offices, friendly societies and other organisations such as unit trusts; (ii) superannuation, pension and retiring allowance funds constituted by businesses; and (iii) direct payments of pensions and/or retiring allowances by the employer. No details have been released for individual states. Australian data are published in the Bureau's bulletin 'Survey of Selected Private Pension Funds'.

Government, Local Government and Semi-Government Schemes

The levels of government operating in Tasmania are: (i) federal; (ii) state; (iii) local authority; and (iv) semi-government authority. In the section that follows, any pension or superannuation scheme affecting employees of the Federal Government or its instrumentalities is excluded.

Government superannuation and pension schemes are included as part of 'Private Finance' because the funds involved do not belong to any government but are actually trust moneys held on behalf of contributors. Employees of the State Government contribute to separately constituted funds to which the State Government also makes contributions. Employees of local government and semi-government authorities are covered either by separately constituted funds or by schemes operated through life insurance offices.

The first pension and gratuity scheme for State public servants, introduced in 1860, was non-contributory and short-lived, being repealed in 1863. A contributory provident fund was established under the *Civil Service Act* 1900 but this scheme was also short-lived and made way for a contributory but State-subsidised scheme established under the *Public Service*

Superannuation Fund Act 1905; a year earlier, a distinct fund had been established with similar principles to serve the teaching service. The *Superannuation Act 1938* established a new fund to serve both public servants and teachers but some pensions continued to be paid from the two funds established in 1904 and 1905. It was not until 1 July 1968 that the residual assets and pension liabilities of these older funds were transferred to the State Superannuation Fund Board. The Assets transferred from the 1904 teachers' fund were \$52 990 and from the 1905 public servants' fund, \$17 103.

State Superannuation Scheme 1971: In December 1970, the *Superannuation Fund Act 1938* was amended to provide for adjustments to pensions in accordance with movements in the Consumer Price Index. Next, a new scheme was embodied in the *Retirement Benefits Act 1970*, the date of operation being fixed at 1 July 1971. Contributors to the 'old' scheme were given the right of election, i.e. to change to the 'new' scheme or to stay with the 'old'.

The adoption of fixed percentage contributions as the basis for the new scheme overcame the main difficulty with the more traditional type of scheme, namely the prohibitive cost of new units for contributors in the upper age brackets. The other improvement was the provision for automatic adjustment of the pension in accordance with annual Consumer Price Index movements.

Separately Constituted Funds: In the table that follows, the operations of the following schemes have been combined and summarised: (i) State Superannuation Fund; (ii) State Retirement Benefits Fund; (iii) Police Provident Fund; (iv) Metropolitan Transport Trust—Retiring Allowance and Staff Pension Funds; (v) Marine Boards' independent schemes; (vi) University of Tasmania—Non-Assurance Subscribers' Accumulation and Additional Benefits Funds; (vii) Hobart Corporation Retiring Allowance Funds; and (viii) Milk Board of Tasmania Superannuation Fund.

State, Local Government and Semi-Government Pension and Superannuation Schemes Operated Through Separately Constituted Funds (a)

Particulars	1972-73	1973-74	1974-75	1975-76	1976-77
	\$'000	\$'000	\$'000	\$'000	\$'000
Income—					
Contributions—					
Employees	4 098	4 945	6 966	8 286	9 553
Employing authorities	3 542	4 122	5 112	6 462	8 761
Interest, dividends and rent	2 513	2 990	3 936	5 040	6 014
Other income	241	447	562	547	1 010
Total	10 394	12 505	16 576	20 335	25 338
Expenditure—					
Pensions	4 126	4 862	5 910	7 675	9 796
Lump sum payments—					
On retirement or death	755	818	1 202	1 262	1 700
On resignation or dismissal	530	737	554	1 057	1 302
Other expenditure	30	47	272	657	323
Total	5 441	6 464	7 938	10 650	13 121
Total assets at end of year	42 206	48 274	57 114	66 773	78 986
	no.	no.	no.	no.	no.
Funds in operation	12	12	12	11	11
Contributors	15 087	15 705	16 468	16 969	17 759
Number of pensioners	3 152	3 249	3 401	3 557	3 751

(a) As there is no uniform accounting period for these funds, financial details are in respect of accounting years ending during the years shown; details relating to the number of contributors, etc. are in respect of numbers at the end of accounting periods ending during the years shown.

In the previous table, the principal funds included are the State Superannuation Fund and the Retirement Benefits Fund contributed to by all permanent full-time employees of the Public Service, Teaching Service, Transport Commission, Hydro-Electric Commission, Metropolitan Transport Trust, all hospitals subsidised by the State Government, and certain police officers (see notes on Police Provident Fund for details). The following table gives principal details of these two funds:

State Superannuation Fund and Retirement Benefits Fund

Particulars at 30 June	Number of contributors	Number of pensioners		Accumulated funds (a) (\$'000)
		Ex-employees	Widows and children	
STATE SUPERANNUATION FUND				
1973.....	6 255	1 612	1 195	32 611
1974.....	5 674	1 604	1 180	(b) 22 767
1975.....	3 922	1 626	1 165	25 318
1976.....	3 616	1 608	1 167	27 733
1977.....	3 347	1 588	1 190	25 772
RETIREMENT BENEFITS FUND				
1973.....	7 364	240	64	3 748
1974.....	8 560	329	88	(b) 19 110
1975.....	11 092	429	121	24 457
1976.....	11 919	569	151	31 355
1977.....	13 016	724	190	44 817

(a) Total assets less liabilities.

(b) Assets to the value of \$12 355 344 were transferred from the State Superannuation Fund to the Retirement Benefits Fund during 1973-74.

Police Provident Fund: The Police Provident Fund, a *closed fund* included in an earlier table, had accumulated funds of \$5 075 105 at 30 June 1977. An amendment to the *Superannuation Act 1938*, in 1963, provided that police officers appointed after 31 December 1963 were required to become contributors to the now closed State Superannuation Fund. Police officers appointed prior to 1 January 1964 could continue as contributors to the Police Provident Fund or exercise an option to become contributors to the State Superannuation Fund. Police officers appointed on or after 1 July 1971 contribute to the Retirement Benefits Fund.

Schemes Operated Through Life Insurance Offices: A number of local government and semi-government authorities in Tasmania operate pension and superannuation schemes for their employees through life insurance offices. The next table combines and summarises the operations of such schemes. The following are the main authorities concerned: (i) Semi-government—marine boards, fire brigades, Metropolitan Transport Trust (Launceston and Burnie), University of Tasmania, ambulance boards, Society for Blind and Deaf, Museum and Art Gallery, Botanical Gardens; and (ii) Local government—the cities and municipalities. Some authorities, e.g. University, Metropolitan Transport Trust, etc., operate schemes on both bases, i.e., some through separately constituted funds, and others through life insurance offices.

Local and Semi-Government Pension and Superannuation Schemes Operated Through Life Insurance Offices (a)

Particulars	1972-73	1973-74	1974-75	1975-76	1976-77
	\$'000	\$'000	\$'000	\$'000	\$'000
Income—					
Contributions—					
Employees	653	914	1 168	1 508	1 803
Employing authorities	994	1 523	1 906	2 446	2 982
Surrenders	125	237	397	362	326
Death claims	68	156	174	200	431
Matured policies	567	521	511	608	1 224
Other income	20	155	166	254	339
Total	2 428	3 507	4 322	5 378	7 104
Expenditure—					
Premiums paid to insurance companies	1 674	2 192	2 734	3 469	4 295
Benefits—					
On death or retirement	640	678	813	1 049	1 980
On resignation or dismissal	121	235	399	268	338
Other expenditure	7	10	24	36	35
Total	2 442	3 115	3 970	4 823	6 649
Funds in operation	no.	no.	no.	no.	no.
Contributors	21	22	22	20	20
	2 832	3 061	3 233	3 451	3 549

(a) As there is no uniform accounting period for these schemes, financial details are in respect of accounting years ending during the years shown; details relating to the number of contributors, etc. are in respect of numbers at the end of accounting periods ending during the years shown.

Miners' Pension Fund

In 1943 a bill was introduced into the Tasmanian Parliament to establish a miners' pension fund; the legislation received Royal Assent in 1944. For the purposes of the original legislation and subsequent amending Acts a mine was defined as '... a coal mine or oil-shale mine in this State, and includes a quarry in this State from which coal or oil-shale is obtained, and all the land at or near the entrance to the workings in such a mine or quarry and occupied by the owner in connection with the winning of coal or oil-shale therefrom'.

From the Fund, administered by a three-man board, pensions are paid to miners upon retirement or when incapacitated by injury, etc. and in certain circumstances, to widows and dependants. Contributions to the fund are made by the State Government, mine owners and miners. Details are as follows:

Miners' Pension Fund

Particulars	1972-73	1973-74	1974-75	1975-76	1976-77
	\$'000	\$'000	\$'000	\$'000	\$'000
Income—					
Contributions—					
Employees	2	2	2	3	3
State Government	30	50	50	50	50
Mine owners	12	11	12	16	19
Interest, dividends and rent	10	10	13	13	17
Total	54	73	77	82	89
Expenditure—					
Pensions	52	50	58	57	56
Other expenditure	2	4	2	2	2
Total	54	54	60	59	58
Assets (at end of period)	168	187	203	226	258
Contributors at 30 June	no.	no.	no.	no.	no.
Pensioners at 30 June	46	55	66	80	81
	132	129	123	115	110

An actuarial report in 1963 indicated that the fund was deficient to the extent of \$657 098. Amending legislation in 1963 provided for the State to contribute such annual sum, not exceeding \$30 000, as the Treasurer might consider necessary to ensure the solvency of the Fund. Previously the State had matched the mine owners' contributions which were related to coal production. The Act was further amended in 1973 to remove the limit on the Government's contribution.

The Parliamentary Pension and Superannuation Scheme

The *Parliamentary Retiring Allowances Act* 1955 was repealed and replaced by the *Parliamentary Superannuation Act* 1973, effective from 1 July 1973.

The previous scheme was purely contributive. It provided for a full basic rate pension for members who retired, or were defeated, after a minimum qualifying period of 15 years. Lesser rate pensions were calculated pro-rata to the length of service expressed as a fraction of 15 years; for service less than eight years, a member received only a refund of his contributions. The pension applicable was an amount equal to \$12.50 weekly, plus 34.5 per cent of Australian average weekly earnings per employed male unit in each year ended March, as calculated from employment and wages data and wages on payroll tax returns.

Parliamentary Superannuation Act 1973

Administration of the Fund, established under the Act, is vested in the Parliamentary Superannuation Trust which consists of the President of the Legislative Council, the Speaker of the House of Assembly and the Under-Treasurer. Contribution to the Fund is compulsory and is payable at the rate of 12 per cent of the member's parliamentary salary.

The annual rate of pension is calculated as a proportion of basic salary (see the section 'Salaries of Members of Parliament' in Chapter 3), multiplied by the ratio of the total parliamentary salary (excluding allowances) received during the period of service, to the total basic salary payable in respect of that period. The proportion of basic salary used in the calculation varies with the length of service (from 41.2 per cent for eight years service to 70.0 per cent for 20 years or more service). Members who retire or resign with less than eight years service are only entitled to a refund of their contributions.

Pension Entitlement: A member is entitled to a pension in the following circumstances:

- (i) if he ceases to be a member, for any reason, after 15 years service; or
- (ii) he has been a member for eight years or more but less than 15 years and resigns for reasons which the Trust certifies to be 'good and sufficient'; or
- (iii) he has been a member for eight years or more but less than 15 years, his term of office expires and he fails to be re-elected for one of several reasons specified in the Act; or
- (iv) he is forced to retire for medical reasons (under these circumstances a member with less than eight years service may be entitled to a pension calculated as though he had served for eight years).

These general provisions of contributions and rate of pension may be varied in cases where the Trust sees fit and which are in accordance with the Act. Any appeal against a decision of the Trust is heard by the Supreme Court of Tasmania.

State Parliamentary Superannuation Scheme (\$'000)

Particulars	1971-72	1972-73	1973-74 (a)	1974-75	1975-76	1976-77
Income—						
Members' contribution (b)	46	49	86	97	127	145
Government contribution	76	72	140	200	301	(d) 1 107
Interest	—	—	—	—	—	1
Total	122	121	227	297	428	1 253
Expenditure						
Pension payments (c)	93	120	216	295	423	558
Other (including refunds)	29	1	7	3	1	30
Total	122	121	224	299	424	588

State Parliamentary Superannuation Scheme
(\$'000)—continued

Particulars	1971-72	1972-73	1973-74 (a)	1974-75	1975-76	1976-77
Total assets (at end of period)	—	—	6	6	6	672
Less liabilities	—	—	2	4	—	—
Accumulated funds	—	—	3	2	6	672

(a) New scheme introduced. See explanatory notes preceding table.

(b) Number of contributors throughout period, 54. Contribution for basic rate pension compulsory.

(c) Number of pensioners at 30 June 1977, 48.

(d) Increase due to transfer of additional funds from Consolidated Revenue on the recommendation of the Actuary, to ensure solvency of the scheme.

Real Estate Transactions

Title to Land

When acquiring land today, the buyer needs to know whether the documents are under the 'old system' or the 'new system'. The new system dates from the *Real Property Act* 1862 when Tasmania introduced an adaptation of the Torrens system (Sir Robert Torrens' Real Property Act became law in S.A. in 1858). The Torrens system provides that the matter of title to land shall be a government responsibility. Each piece of separately-owned land is represented by a certificate of title which, with a few minor exceptions, is guaranteed by the State; in Tasmania, the issue and registration of titles is the work of the Lands Titles Office. A statutory assurance fund is maintained to indemnify owners against loss through error.

Land alienated before 1862 was not subject to the provisions of the *Real Property Act* and transactions involving such land are still being recorded under the *Registration of Deeds Act* (the first Tasmanian Deeds Act was made in 1827); this is the old 'system', involving complicated conveyancing, searching, etc. The conveyance is merely evidence of ownership as between the parties to the agreement and lacks the element of conclusive proof inherent in the new system under which the Torrens certificate of title proclaims 'that the person mentioned in it is owner of the land there in described as against all the world'. Put another way, land passing from A to B, and then to C under the old system requires a search to ascertain the validity of B's ownership and then A's ownership; under the new system, C's certificate of title is adequate proof without any reference to A and B.

The dual system persists to this day but the *Local Government (Registered Titles) Act* 1966 provided that all new sub-divisions of land should be brought under the *Real Property Act* without charge. Fees on voluntary applications to bring land under the *Real Property Act* have also been abolished to encourage other owners to change to the Torrens system.

Property Sales and Mortgages

Sales of real estate and mortgages on the security of real estate, involve either certificates of title, under the new system, or deeds, conveyances, etc. under the old system. In the following table sales and mortgages, recorded both under the *Real Property Act* and the *Registration of Deeds Act*, are combined to give a single series showing real estate transactions in Tasmania for recent years:

Real Estate Transactions (a)

Year	Property sales		Mortgages			
	Number	Total consideration	Registered		Discharged	
			Number	Amount	Number	Amount
		\$'000		\$'000		\$'000
1971-72	11 452	91 435	9 803	71 007	7 813	37 332
1972-73	14 052	135 539	12 134	93 804	9 842	59 796
1973-74	17 685	205 549	13 448	129 787	11 125	61 124
1974-75	14 716	188 436	11 759	120 491	10 127	61 366
1975-76	16 493	289 091	14 323	216 468	11 237	67 872
1976-77	16 319	301 839	14 989	217 298	11 229	77 903

(a) Registered under the *Real Property Act* and *Registration of Deeds Act*.

Further References

ABS Publications Produced by the Tasmanian Office

Private Finance, Tasmania (5601-6) (annual, 1975-76 issue released 17/1/78)

Friendly Societies, Report on, Tasmania (5603-6) (annual, 1976 released 27/2/78)

ABS Publications Produced by the Canberra Office

Savings Banks (Preliminary) (5602-0) (monthly, July 1978 issue released 6/9/78)

Banking (5605-0) (monthly, June 1978 released 4/9/78)

Housing Finance For Owner Occupation, Savings Banks and Trading Banks (5608-0) (monthly, July 1978 released 12/9/78).

Housing Finance For Owner Occupation, Permanent Building Societies (5610-0) (monthly, July 1978 released 14/9/78)

Permanent Building Societies (5613-0) (annual, 1974-75 released 5/4/77)

Credit Unions: Assets, Liabilities, Income and Expenditure (5618-0) (annual, 1976-77 released 8/5/78)

General Insurance (5620-0) (annual, 1976-77 released 8/9/78)

Life Insurance (5621-0) (monthly, May 1978 released 8/9/78)

Life Insurance (5622-0) (annual, 1976 released 9/5/78)

Instalment Credit for Retail Sales (5631-0) (monthly, June 1978 released 31/8/78)

Chapter 13

HOUSING AND BUILDING

DWELLING STATISTICS

1976 Census: Definitions

Information concerning the housing of the State's population is obtained from householders' schedules collected during population censuses. For Census purposes, dwellings are divided into two groups, occupied dwellings and unoccupied dwellings. These are defined below:

Occupied Dwellings

An *occupied dwelling* is defined as the premises occupied by a household on Census night (for a definition of *household* see below). Occupied dwellings are further classified into the following two categories:

A *private dwelling* is normally a house, room or flat but it can also be a tent, houseboat, or a caravan if standing on its own block of land, and not occupied by members of the same household resident in an adjacent dwelling. It is important to note that the total number of dwellings may be more than the total number of known structures in any given area.

Non-private dwellings are hotels, motels, hostels, boarding houses, gaols, religious and charitable institutions, defence establishments and other communal dwellings. Usually, occupants of such dwellings use communal facilities such as hotel dining-rooms or mess halls. A caravan in a caravan park (whether there permanently or temporarily) is treated as part of a non-private dwelling, as are self-contained units provided by commercial enterprises such as hotels, motels or guest-houses.

Unoccupied Dwellings

An *unoccupied dwelling* is a structure built specifically for living purposes and capable of being lived in, but unoccupied at the time of the Census. Vacant houses, holiday houses, huts, cabins (other than seasonal workers' quarters) and houseboats are therefore counted as unoccupied dwellings; but vacant tents, garages and caravans (if not normally occupied) are not. Only private dwellings can be classified as unoccupied. Unoccupied dwellings include dwellings vacant because they have been newly completed, vacant for demolition or repair, holiday homes, dwellings to let, and dwellings where the household was absent on Census night.

Household

For Census purposes, a *household* is a group of people who live together as a single domestic unit and eat together, the food eaten by members being served from a common supply. A person living alone is also a household. It is possible, then, for more than one household to live in one house or structure. For example, a lodger who lives with a family and provides all his food for himself is not a member of the family's household but constitutes a separate household and therefore completes a separate Householder's Schedule.

Census Results

Details in this section are 'as recorded' census results and have not been adjusted for 'under-enumeration' (see Chapter 6).

The following table shows occupied, unoccupied and total dwellings at the 1971 and 1976 Censuses:

Dwellings and Occupants at 30 June 1971 and 1976

Description	1971 Census		1976 Census	
	Number	Total occupants	Number	Total occupants
Private—				
Occupied	109 597	373 530	121 832	387 176
Unoccupied	13 307	—	15 786	—
Total	122 904	373 530	137 618	387 176
Non-private	865	16 883	741	15 692
Total dwellings	123 769	390 413	138 359	402 868

Nature of Occupancy

The details contained in the next table relate only to occupied private dwellings:

Occupied Private Dwellings: Nature of Occupancy and Number of Persons, 30 June 1976

Nature of occupancy	Dwellings		Persons	
	Number	Proportion (per cent)	Number	Proportion (per cent)
Purchaser	43 958	36.1	165 273	42.7
Owner	38 852	31.9	107 449	27.8
Owner/purchaser undefined	474	0.4	1 159	0.3
Tenant—				
Housing authority	6 298	5.2	23 094	6.0
Other	23 340	19.2	65 687	17.0
Other	6 814	5.6	19 256	5.0
Not stated	2 096	1.7	5 258	1.4
Total	121 832	100.0	387 176	100.0

Structure of Dwelling

The following table classifies private dwellings by type of structure:

Structure of Private Dwellings at 30 June 1976

Structure	Number of dwellings	Proportion (per cent)
Separate house	121 546	88.3
Flats or home units etc.—		
Up to three storeys	12 616	9.2
Above three storeys	668	0.5
Improvised dwelling	416	0.3
Mobile dwelling	654	0.5
Not stated	1 718	1.2
Total private dwellings	137 618	100.0

Fuel or power usage

The following table classifies occupied private dwellings by type of power or fuel used in household functions:

Number of Occupied Private Dwellings: Power or Fuel Usage at 30 June 1976

Power or fuel	Cooking	Lighting	Living room heating	Bath water heating
Electricity	107 502	117 268	22 012	106 496
Wood	5 548	—	42 034	5 116
Oil, kerosene	524	266	46 472	534
Coal, coke or briquettes	158	—	358	306
Gas	6 064	116	5 458	2 086
Solar energy	8	—	64	12
Other	32	98	836	106
No fuel stated	24	16	242	1 522
Not stated	1 972	4 068	4 356	5 654
Total occupied private dwellings	121 832	121 832	121 832	121 832

Material of outer walls

The next table classifies occupied private houses and other private dwellings by material of their outer walls:

Number of Occupied Dwellings by Type of Outer Wall Material at 30 June 1976

Material of outer walls	Separate houses	Other private dwellings	Total
Timber, weatherboard	54 770	6 576	61 346
Brick, brick veneer	35 148	9 736	44 884
Concrete, cement block	4 314	2 090	6 404
Fibro, asbestos	3 704	410	4 114
Stone	862	662	1 524
Metal	1 258	550	1 808
Other	182	36	218
Not stated	296	1 238	1 534
Total occupied private dwellings	100 534	21 298	121 832

Intercensal Dwelling Estimates

It is not possible to prepare a detailed analysis of private dwellings between censuses but intercensal estimates of the number of houses and other dwellings by local government areas are prepared. The base for these estimates is the total number of occupied and unoccupied private dwellings as recorded at the preceding census. The census figures are then adjusted for: (i) demolitions, destructions by fire, conversions and transfers of houses and other dwellings; and (ii) completions of new houses and other dwellings. The transfer of houses between local government areas is merely a redistribution and does not affect the total number of houses for the State. Information about demolitions, conversions and transfers is obtained from local government authorities and the Hydro-Electric Commission. The number of new houses and other dwellings completed is available from the quarterly building construction collection conducted by the Bureau.

The following table, showing the distribution of occupied and unoccupied private dwellings at 30 June 1976 and 1977, differs from the results of the 1976 Population Census in that non-self-contained and improvised dwellings have been excluded:

Number of Occupied and Unoccupied Private Dwellings (a) at 30 June 1976 and 1977

Local government area (statistical division and sub-division in bold type)	1976 Census			Estimated 1977
	Occupied	Unoccupied	Total	
Hobart (H)	17 022	1 270	18 292	18 576
Glenorchy (H)	12 614	578	13 192	13 519
Clarence (H)	11 800	858	12 658	13 085
Brighton (H) (S)	1 312	30	1 342	1 610
Kingborough (H) (S)	4 090	310	4 400	4 715
New Norfolk (H) (S)	2 452	194	2 646	2 682
Sorell (H) (S)	1 384	1 412	2 796	2 915
Bothwell (S)	234	674	908	923
Bruny (S)	116	298	414	439
Esperance (S)	928	296	1 224	1 235
Glamorgan (S)	406	466	872	904
Green Ponds (S)	250	20	270	274
Hamilton (S)	910	146	1 056	1 004
Huon (S)	1 330	108	1 438	1 449
Oatlands (S)	652	142	794	796
Port Cygnet (S)	590	230	820	849
Richmond (S)	500	70	570	585
Spring Bay (S)	530	266	796	809
Tasman (S)	324	440	764	798
HOBART	48 952	4 190	53 142	54 872
SOUTHERN	8 492	3 618	12 110	12 295
Launceston	11 008	860	11 868	11 913
Beaconsfield	3 666	706	4 372	4 520
Deloraine	1 422	206	1 628	1 654
Evandale	450	66	516	535
George Town	1 716	538	2 254	2 361
Lilydale	2 362	96	2 458	2 537
Longford	1 596	138	1 734	1 772
St. Leonards	5 174	260	5 434	5 631
Westbury	1 622	122	1 744	1 804
Tamar	29 016	2 992	32 008	32 727
Campbell Town	480	102	582	584
Fingal	874	278	1 152	1 161
Flinders	286	76	362	369
Portland	518	614	1 132	1 181
Ringarooma	694	146	840	849
Ross	166	74	240	240
Scottsdale	1 186	330	1 516	1 573
North Eastern	4 204	1 620	5 824	5 957
NORTHERN	33 220	4 612	37 832	38 684
Burnie	5 670	316	5 986	6 134
Circular Head	2 110	422	2 532	2 561
Devonport	6 462	398	6 860	7 166
Kentish	1 126	134	1 260	1 271
King Island	732	112	844	858
Latrobe	1 528	294	1 822	1 876
Penguin	1 412	108	1 520	1 566
Ulverstone	3 552	294	3 846	3 961
Wynyard	3 174	370	3 544	3 651
North Western	25 766	2 448	28 214	29 044
Gormanston	86	34	120	115
Queenstown	1 204	126	1 330	1 331
Strahan	136	112	248	248
Waratah	468	70	538	561
Zeehan	1 104	216	1 320	1 470
Western	2 998	558	3 556	3 725
MERSEY-LYELL	28 764	3 006	31 770	32 769
TASMANIA	119 428	15 426	134 854	138 620

(a) Houses and other self-contained dwellings (flats, home units, etc.); excludes non-self-contained and improvised dwellings.

BUILDING STATISTICS

Scope

For statistical purposes, building relates exclusively to the erection of new buildings (including major new additions to existing buildings). Construction work such as the building of railways, bridges, earthworks, water storages, piers, wharves, etc. is excluded. Minor additions, alterations, renovations and repairs to buildings are also excluded because of the difficulty of obtaining lists of persons who undertake this work.

When a dwelling is attached to a new building, the whole unit, both in regard to number and value, is classified according to the type of new building (e.g. a new shop and dwelling is classified simply as a shop). Figures for other dwellings include 'home units' but not conversions of existing buildings into flats. Number of 'other dwellings' refers to the number of new individual dwelling units (e.g. one block of flats containing 10 separate flat units would be counted as 10 dwellings).

Details obtained from government authorities on their construction programs and from building contractors refer to all parts of the State. Details for owner-builders cover only those areas subject to building control by local government authorities; thus some farm buildings are excluded but this does not materially affect the figures.

Change in Series

Minor changes have been made in the scope and presentation of building statistics from 1973-74. For dwellings, separate figures are now shown for the value of new work, and the value of alterations and additions valued at \$10 000 and over. Previously, data were only published for new work and alterations and additions combined (however, new work and alterations and additions are still combined for 'other building'). Up to 1972-73, alterations and additions valued at \$10 000 and over were classified as new dwelling units, but are *not* counted as dwelling units from 1973-74. Alterations and additions valued at under \$10 000 are excluded from building statistics.

Source of Data

The main statistics relate to building approvals and to building operations (commencements, completions, etc.). The data are derived as follows:

Building Approvals: These comprise: (i) approvals by local government authorities for the construction of private buildings; (ii) contracts let and day labour projects commenced by governmental authorities; and (iii) private buildings reported by contractors to have been commenced in certain areas of the few rural municipalities where building regulations do not apply to the whole municipality. Details are compiled monthly.

Building Operations: Returns are obtained from: (i) building contractors engaged in the erection of new buildings; (ii) owner-builders; and (iii) federal, state, local and semi-government authorities. Statistics are compiled at quarterly intervals.

Definitions

A Dwelling: is classified as either a 'House' or an 'Other Dwelling':

- (i) A 'House' is defined as a building which has been designed or adapted so that its prime purpose is to be a single self-contained (i.e. including bathing and cooking facilities) dwelling unit which is completely detached from other buildings, and occupies (except in such cases as dwellings built for employees or families of the owner or lessee of the land) a separate titled block of land.
- (ii) An 'Other Dwelling' is defined as a self-contained structural dwelling unit other than a house as defined in (i) above. These include flats, home units, semi-detached dwellings, villa units, town houses, etc.

Contract-built: Includes the operations of all building contractors and government authorities which undertake the erection of new buildings.

Owner-built: An 'owner-built' house is one erected by the owner, or under the owner's direction but without the services of a contractor responsible for the whole job.

Commenced: A building is regarded as having been commenced when work on the foundations has begun.

Completed: A building is regarded as having been completed when the contractor has fulfilled the terms of the contract.

With both 'commencements' and 'completions' there is some difficulty in maintaining a uniform classification since the definition of an exact point of time in building operations is involved.

Under Construction: A building is so classified if it is uncompleted at the end of the period whether or not work on it was actively proceeding at that date.

Value of Building: approved, commenced, completed, or under construction represents the estimated value of the whole job when completed, *excluding* the value of the land on which the job is carried out.

Value of Building Work Done: represents the estimated value of the building work actually carried out during the period.

All values shown are *current values*, i.e. no adjustment has been made for the substantial rise in building costs over recent years. Some perspective to the increases in values can be gained from the wholesale price indexes of materials used in house building and of materials used in building other than house building for Hobart, and from increases in average weekly earnings per employed male unit for Tasmania (see table and graphs appearing later in this Chapter).

Building Approvals

The following two tables show details of building approvals; a distinction is made between 'private' and 'government' and the information is dissected to give separate figures for statistical divisions. In 1976-77, 45 per cent of the total value of building approval was attributed to the Hobart Division, four per cent to the Southern Division, 30 per cent to the Northern Division, and 21 per cent to the Mersey-Lyell Division.

Building Approvals, by Statistical Division, 1976-77

Particulars	Hobart	Southern	Northern	Mersey-Lyell	Total Tasmania
NUMBER					
New dwellings—Private	1 301	292	953	916	3 462
Government	440	18	303	179	940
Total	1 741	310	1 256	1 095	4 402
VALUE (\$'000)					
New dwellings—Private	38 828	5 370	23 835	24 334	92 367
Government	8 385	632	5 879	3 263	18 159
Alterations and additions to dwellings (a)—Private	1 822	242	949	864	3 877
Government	—	—	—	—	—
Other building—Private	12 825	430	16 661	7 559	37 474
Government	27 347	2 065	12 282	6 992	48 685
All building—Private	53 476	6 042	41 444	32 756	133 718
Government	35 732	2 697	18 161	10 255	66 844
Total	89 208	8 739	59 605	43 010	200 562

(a) Valued at \$10 000 and over.

Building Approvals, Selected Years

Particulars	1966-67 (a)	1972-73 (a)	1973-74	1974-75	1975-76	1976-77
NUMBER						
New dwellings—Private	2 709	3 176	3 404	2 559	3 673	3 462
Government	736	650	771	800	763	940
Total	3 445	3 826	4 175	3 359	4 436	4 402
VALUE (\$'000)						
New dwellings—Private	22 450	39 436	51 330	48 277	88 100	92 367
Government	4 803	6 411	9 238	12 861	13 523	18 159
Alterations and additions to dwellings (b)—Private	n.a.	n.a.	778	1 163	2 295	3 877
Government	n.a.	n.a.	19	—	31	—
Other building—Private	14 760	15 834	19 878	21 318	25 217	37 474
Government	11 940	28 740	19 476	29 115	31 224	48 685
All building—Private	37 210	55 270	71 986	70 760	115 612	133 718
Government	16 743	35 151	28 733	41 977	44 777	66 844
Total	53 953	90 421	100 719	112 736	160 390	200 562

(a) Alterations and additions to dwellings valued at \$10 000 and over are included with the number and value of dwellings.

(b) Valued at \$10 000 and over.

Building Construction

Houses Constructed

The next table shows details of the number and value of houses commenced, completed and under construction:

Construction of New Houses (a)

Year	Commenced		Completed		Under construction (b)	
	Number	Value (c)	Number	Value (c)	Number	Value (c)
		\$m		\$m		\$m
1966-67	2 952	24.6	2 765	22.1	1 729	14.1
1971-72	2 231	25.7	2 261	26.2	1 337	14.5
1972-73	2 795	36.4	2 384	29.6	1 735	22.0
1973-74	3 132	49.5	2 819	41.6	2 003	31.2
1974-75	2 497	49.8	2 650	48.2	1 798	35.0
1975-76	3 078	74.9	2 804	63.3	1 981	49.4
1976-77	2 966	81.0	3 137	84.9	1 778	49.1

(a) Alterations and additions valued at \$10 000 and over are counted as new houses up to 1972-73 but are excluded from 1973-74.

(b) At end of year.

(c) When completed.

Material of Outer Walls: The following table shows the number of new houses completed and their classification according to the material used in their outer walls. Until 1963-64, wood was the predominant material used, but since then, brick veneer has become the principal outer wall material for new houses; in 1976-77 brick veneer houses accounted for 79 per cent of all houses completed.

Number of New Houses Completed Classified by Material of Outer Walls (a)

Material of outer walls	1966-67	1972-73	1973-74	1974-75	1975-76	1976-77
Brick, concrete, etc.—						
Solid	167	75	122	154	144	162
Veneer	1 159	1 943	2 383	2 173	2 296	2 473
Wood (weatherboard, etc.)	1 073	204	157	116	112	148
Asbestos cement	354	125	126	182	177	199
Other	12	37	31	25	75	155
Total	2 765	2 384	2 819	2 650	2 804	3 137

(a) Alterations and additions valued at \$10 000 and over are counted as new houses up to 1972-73 but excluded from 1973-74.

Government Construction of Houses: The post-war era was notable for the entry of the State Government into the housing field on a large scale; in November 1945, the Federal Government entered into an agreement with the states whereby it would provide finance for housing projects to be built by the state governments. Under the agreement, Tasmania received \$5 670 000 which it repaid on withdrawing from the scheme in August 1950. The Tasmanian Government nevertheless continued to build houses using the resources available from its own Loan Fund. In 1956, the State Government entered into a new agreement with the Federal Government, an agreement renewed with minor modifications in 1961 and 1966. This method of allocating funds to the states ceased at 30 June 1971. Tasmania's aggregate advances under the scheme to 30 June 1971 were \$89 477 000. For 1971-72 and 1972-73 funds for State housing were provided as part of the State's approved loan raisings (i.e. loans raised for housing were credited to the Loan Fund and expenditure was made from the Loan Fund). However, at the June 1973 Premiers' conference the question of allocation of funds for state housing was again discussed and a new Federal-State Housing Agreement was proposed which provided for the states to receive advances for welfare housing during the five years 1973-74 to 1977-78; these advances are in addition to the states' Loan Fund borrowing programs. (In effect the pre-1971-72 situation has been restored.) Tasmania's allocation for 1977-78 under the 1973 Housing Agreement was \$20 000 000.

The following table shows, for Tasmania, the number of houses completed, for recent years and distinguishes between those built for government authorities (all types) and those built for private persons:

Number of New Houses Completed For Government Authorities and Private Persons (a)

Year	For government authorities	For private persons	Total	Year	For government authorities	For private persons	Total
1971-72	466	1 795	2 261	1974-75	548	2 102	2 650
1972-73	542	1 842	2 384	1975-76	793	2 011	2 804
1973-74	586	2 233	2 819	1976-77	696	2 441	3 137

(a) Alterations and additions valued at \$10 000 and over are counted as new houses up to 1972-73, but are excluded from 1973-74.

The principal construction authority in Tasmania is the Housing Division of the State Department of Housing and Construction but 'houses built for government authorities' includes construction by, or for, other State and Federal Government departments, instrumentalities, etc.

Construction of New Houses and Other New Dwellings

The figures for the more recent years show a high level of new dwellings other than houses (individual units) erected. In 1976-77 'Other new dwellings' comprised 22 per cent of the total number of dwellings completed compared to only 6 per cent in 1976-77.

In the following table, details are given of completions of new houses and other new dwellings:

New Houses and Other New Dwellings Completed (a)

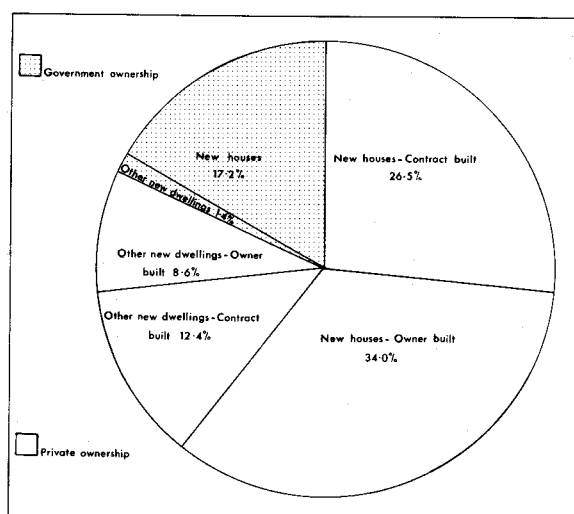
Particulars	1966-67	1972-73	1973-74	1974-75	1975-76	1976-77
NUMBER						
New houses—						
Government ownership—						
Contract-built	360	280	290	269	465	327
Day labour	267	262	296	279	328	369
Private ownership—						
Contract-built	1 223	1 117	1 255	1 093	1 001	1 069
Owner-built	915	725	978	1 009	1 010	1 372
Total houses	2 765	2 384	2 819	2 650	2 804	3 137
Other new dwellings (b)	185	781	700	812	879	902
Total houses and other dwellings	2 950	3 165	3 519	3 462	3 683	4 039
VALUE (\$'000)						
New houses	22 063	29 648	41 634	48 154	63 272	84 877
Other new dwellings	1 167	6 542	6 625	10 028	13 858	18 011

(a) Alterations and additions valued at \$10 000 and over are counted as new houses up to 1972-73 but are excluded from 1973-74.

(b) Individual dwelling units.

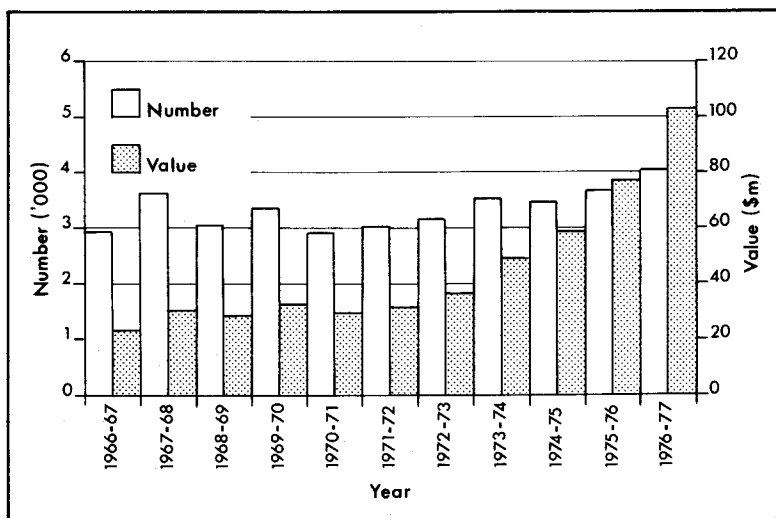
The pie chart below shows the number of new houses and other new dwellings completed, dissected by type of ownership, as a proportion of the total number of dwellings completed:

**New Dwellings Completed, 1976-77
(Proportion of Total Number)**



The following graph shows the number and value of new dwellings completed from 1966-67 to 1976-77. As noted earlier, all values shown in this section are *current values*. If a series for the value of new dwellings completed adjusted to a constant prices basis (to take account of changes in building construction costs) was available, then, if shown on the graph, it could be expected to follow a trend similar to that shown by the number of dwellings completed.

New Dwellings Completed: Number and Value (a)



(a) Alterations and additions valued at \$10 000 or more are included up to 1972-73 but excluded from 1973-74.

The following table dissects the numbers of dwellings commenced, completed and under construction for 1976-77 by statistical division:

Number of Dwellings Commenced, Completed and Under Construction, by Statistical Division, 1976-77

Statistical division or sub-division	Houses			Other dwellings (individual units)			Total number of dwelling units		
	Com-menced	Com-pleted	Under constrn	Com-menced	Com-pleted	Under constrn	Com-menced	Com-pleted	Under constrn
Hobart	1 155	1 274	639	524	556	522	1 679	1 830	1 161
Southern	250	223	230	47	23	28	297	246	258
Northern—									
Tamar	710	654	415	184	160	156	894	814	571
North Eastern	115	131	84	20	4	19	135	135	103
Total	825	785	499	204	164	175	1 029	949	674
Mersey-Lyell—									
North Western	708	739	397	214	155	149	922	894	546
Western	28	116	13	4	4	—	32	120	13
Total	736	855	410	218	159	149	954	1 014	559
Total Tasmania	2 966	3 137	1 778	993	902	874	3 959	4 039	2 652

Construction of All Buildings

The previous tables in this section have been concerned with the construction of new dwellings. The next table shows the value of all building completed according to type; new houses and other new dwellings are included to allow comparison:

Value of all Building Completed: Classified According to Type
(\$'000)

Type of building	1966-67 (a)	1972-73 (a)	1973-74	1974-75	1975-76	1976-77
New houses	22 063	29 648	41 634	48 154	63 272	84 877
Other new dwellings	1 167	6 542	6 625	10 028	13 858	18 011
Total new dwellings	23 230	36 190	48 259	58 182	77 130	102 888
Alterations and additions to dwellings(b)	n.a.	n.a.	347	642	1 684	2 272
Hotels, etc.	1 301	7 751	4 488	2 256	3 828	3 674
Shops	836	2 470	3 980	3 156	2 056	6 838
Factories	5 891	4 447	3 820	5 670	6 955	5 186
Offices	2 711	7 287	8 381	5 721	15 390	7 432
Other business premises	4 338	2 038	2 398	4 296	2 736	4 888
Education	2 616	10 654	13 209	9 980	22 711	25 297
Religion	321	289	147	825	433	424
Health	4 103	4 208	848	3 120	5 835	5 879
Entertainment and recreation	577	1 802	1 322	1 700	2 559	3 003
Miscellaneous	2 293	969	1 747	3 946	3 791	6 779
Total other building	24 986	41 915	40 340	40 669	66 295	69 402
Total all buildings	48 218	78 105	88 946	99 493	145 109	174 563

(a) Alterations and additions valued at \$10 000 and over are included with new houses and other new dwellings.

(b) Valued at \$10 000 and over.

The following table shows the distribution of the value of buildings completed according to type:

Value of Building Completed, by Type of Building and Statistical Sub-division 1976-77
(\$'000)

Statistical division or sub-division	New houses	Other new dwellings	Alterations and additions to dwellings (a)	Shops	Offices	Edu- cation	Other building	Total all building
Hobart	36 900	12 087	1 307	1 659	3 867	10 818	14 207	80 845
Southern	3 944	339	160	22	74	533	911	5 984
Northern—								
Tamar	17 052	2 618	388	3 057	843	4 044	9 977	37 979
North Eastern	2 854	117	48	10	40	359	492	3 919
Total	19 906	2 735	436	3 067	883	4 403	10 469	41 898
Mersey-Lyell—								
North Western	20 351	2 805	370	2 069	2 608	6 273	4 036	38 511
Western	3 776	45	—	22	—	3 271	213	7 326
Total	24 127	2 850	370	2 091	2 608	9 543	4 248	45 836
Total Tasmania	84 877	18 011	2 272	6 838	7 432	25 297	29 833	174 563

(a) Valued at \$10 000 and over.

The following table gives details of the total value of all building commenced, completed and under construction for recent years. The items included under 'all building' are specified in the previous table.

Value (When Completed) of All Building (\$m)

Year	Com- menced	Com- pleted	Under construc- tion (a)	Year	Com- menced	Com- pleted	Under construc- tion (a)
1971-72	64.3	69.7	61.6	1974-75	113.2	99.5	116.3
1972-73	90.6	78.1	76.5	1975-76	156.8	145.1	140.5
1973-74	107.1	88.9	97.4	1976-77	178.6	174.6	153.7

(a) At end of period.

Value of Work Done and Changes in Construction Costs

The *value of building work done* represents the estimated value of the building work actually carried out during the periods shown.

As pointed out in the section 'Definitions' all values shown relating to building jobs are *current values* only; no attempt has been made to adjust values to a constant prices basis which would allow for increases in construction costs over the periods shown. The next table and accompanying graph include details of the relevant wholesale price indexes (for Hobart) and of average weekly earnings per employed male unit for Tasmania, which give some perspective to the trends shown in the building value series. In the semi-logarithmic graph, equal rates of change (compound percentage rates of growth) are represented by lines of the same angle of slope to the horizontal axis. Therefore, this graph enables ready comparison between the respective rates of growth of the value of building work done and the two indexes shown.

Value of Building Work Done, Wholesale Price Indexes and Average Weekly Earnings

Particulars	1966-67	1972-73	1973-74	1974-75	1975-76	1976-77
Value of work done—						
New houses \$'000	22 734	32 568	46 332	48 757	73 190	85 669
Other new dwellings \$'000	n.a.	6 522	8 010	10 046	16 063	20 842
Total new dwellings \$'000	n.a.	39 089	54 342	58 803	89 253	106 511
Alterations and additions to dwellings \$'000	(a)	(a)	444	744	1 883	2 407
Other building \$'000	n.a.	39 055	41 098	57 433	69 414	68 758
Total building \$'000	53 098	78 145	95 884	116 979	160 551	177 676
Percentage increase (b)	22.9	11.3	22.7	22.0	37.2	10.7
Wholesale price index (c)—						
Materials used in house building—						
Index number	100.0	130.8	145.5	179.1	209.2	235.1
Percentage increase (b)	n.a.	8.4	11.2	23.1	16.8	12.4
Materials used in building other than house building—						
Index number	100.0	129.7	143.8	179.3	210.4	234.8
Percentage increase (b)	n.a.	5.8	10.9	24.7	17.3	11.6
Average weekly earnings (d)—						
Amount \$	58.50	95.20	110.50	140.20	157.80	181.20
Expressed as index to base 1966- 67 = 100.0 (e)	100.0	162.7	188.9	239.7	269.7	309.7
Percentage increase (b)	n.a.	8.8	16.1	26.9	12.6	14.8

(a) Alterations and additions to dwellings valued at \$10 000 and over are included with the value of new dwellings.

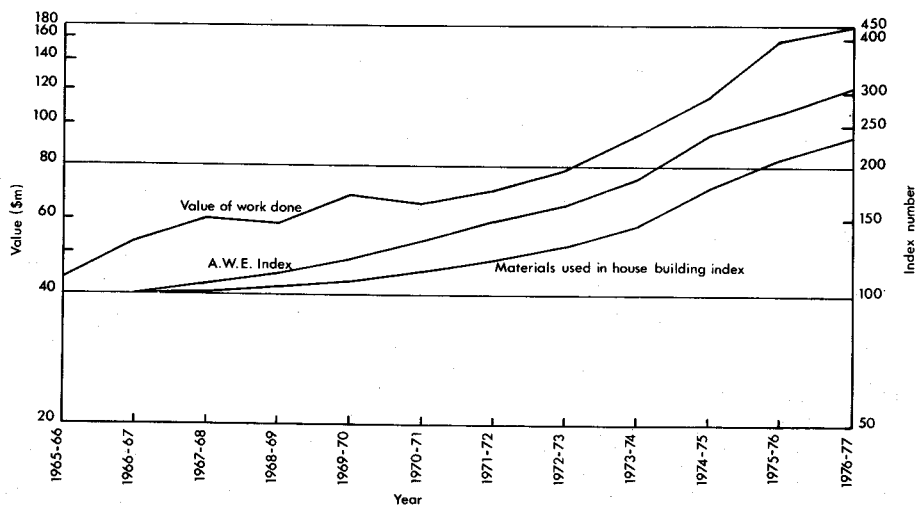
(b) Over previous year.

(c) For Hobart, all groups; base of each index: year 1966-67 = 100.0.

(d) Per employed male unit, Tasmania. Includes earnings of salaried employees, overtime earnings, over-award and bonus payments, etc., in addition to wages at award rates.

(e) Average weekly earnings, Tasmania, 1966-67 = \$58.50.

Value of All Building Work Done, Wholesale Price Index of Materials Used in House Building (a) and Average Weekly Earnings Index (b)
(Semi-logarithmic (Ratio) Scale Graph)



(a) All groups, Hobart; base year 1966-67 = 100.0.

(b) Average weekly earnings per employed male unit for Tasmania adjusted to the base: year 1966-67 = 100.0.

FINANCIAL ASSISTANCE FOR HOUSING

The State Department of Housing and Construction—Housing Division

General

The former Housing Department, now the Housing Division of the State Department of Housing and Construction, was established in July 1953 as a separate authority to administer that portion of the *Homes Act* 1935 which relates to the purchase and development of land for housing, and the erection of homes for rental and sale. Funds for these purposes, up to 30 June 1971, were made available under the Federal-State Housing Agreement; allocations of loan funds under the agreement were: (i) in addition to loan raisings credited to State Loan Fund; and (ii) not part of State public debt. For 1971-72 and 1972-73 loans for State housing were credited to State Loan Fund and formed part of public debt. However, for 1973-74 the pre-1971-72 situation was restored when a new Federal-State Housing Agreement became operative. In addition to providing finance for the purchase and development of land and construction of houses, the new Agreement also provides finance for the purchase, upgrading and renovating of existing dwellings and places certain restrictions on the allocation of homes constructed from Agreement funds. On 14 September 1977, the former Housing Department was amalgamated with the Architectural Branch of the former Public Works Department to form the State Department of Housing and Construction. This new Department combines two Divisions—the Housing Division and the Construction Division. The Housing Division has, from the date of amalgamation, taken over the functions of the former State Housing Department. The Housing Division uses both day labour and private contractors and has its own factory for timber storage, milling and joinery manufacture in addition to plumbing and electrical workshops, etc. Most dwellings constructed are now three-bedroom brick veneer units, roofed with tiles or corrugated iron. Flats for elderly persons, multi-unit flats and villa units have also been constructed.

Construction of Dwellings

During 1977-78, 904 dwellings (598 houses, 160 villa units, 25 movable units and 121 elderly persons' units) were completed. The following table shows the aggregate of dwelling units constructed since 1944 by the Housing Division of the State Department of Housing and Construction and by earlier State Housing Construction Authorities:

**Aggregate of Dwellings Constructed by State Housing Authorities:
From 1944 to 30 June 1978 (a)**

Type of dwelling	Bed-sitting room	One bedroom	Two bedrooms	Three bedrooms	Total
Houses (detached and semi-detached) . . .	—	—	659	15 395	16 054
Multi-unit flats	1	129	178	17	325
Villa units	—	7	347	67	421
Elderly persons' units	462	423	—	—	885
Movable units	27	—	—	—	27
Total dwelling units	490	559	1 184	15 479	17 712

(a) Construction to 30 June 1953 was undertaken by the Housing Division of the Agricultural Bank of Tasmania. Subsequent construction was by the Housing Division of the State Department of Housing and Construction (previously the State Housing Department).

Rental of Dwellings

As from 1 August 1976, all Housing Division dwellings have been allotted on a rental basis only. Allocations are made in accordance with the income limits for eligibility stipulated in the *Housing Agreement Act 1973*. The income limit to qualify for a three bedroom home is set at 85 per cent of average weekly earnings per employed male unit for the latest December quarter figure available for Australia. The weekly rental of newly erected three bedroom homes in the Hobart area as at 30 June 1978, was \$39.00. In cases where the occupiers' incomes are insufficient to enable them to meet the full economic rental, rebates may be provided. These are graduated according to the incomes of the occupiers.

Agricultural Bank of Tasmania—Advances to Homebuilders

The Agricultural Bank of Tasmania is responsible for the administration of funds made under the Home Purchase Assistance Section of the *Housing Assistance Act 1978*. A new Housing Agreement operating from 1 July 1978 consolidated all past agreements. The State has also provided State Loan Funds for lending under the *Homes Act 1935* specifically available for first home builders. Interest rates vary from 6 per cent to 9.5 per cent, depending on need. Repayment terms are normally over 30 years. The new Agreement has the following aims:

- (i) To facilitate home ownership for those able to afford it but not able to gain it through the private market.
- (ii) To provide assistance for home ownership in the most efficient way and thus exclude from eligibility those not in need and minimise continued availability of assistance to those no longer in need. This is to involve provision of assistance that is related to particular recipients' current economic and social circumstances.
- (iii) To enable the states to exercise maximum autonomy and flexibility in the administrative arrangements necessary to achieve (i) and (ii), above.

The following table shows details for recent years:

Agricultural Bank—Advances for Housing (a)

Particulars	1972-73	1973-74	1974-75	1975-76	1976-77	1977-78
Advances approved:						
Number	317	490	453	431	393	366
Value (\$'000)	3 018	5 480	6 148	6 100	8 355	8 354
Advances outstanding (b) (\$'000)	23 219	25 608	30 290	33 481	38 832	43 726

(a) Excludes advances to building societies.

(b) At end of period.

The Agricultural Bank also administers the allocation of advances to Co-operative Housing Societies; details of such advances and of the Co-operative Housing Societies appear in Chapter 12, 'Private Finance'.

Defence Service Homes Corporation

General

The Corporation's function is to administer the *Defence Services Homes Act 1918* which was enacted in order to assist certain former and serving members of the Australian Forces and certain other persons to obtain housing with finance made available on a term of up to 45 years at interest rates from 3¼ per cent.

Defence Service Homes Loans

To be eligible for a loan, an applicant must: (i) have volunteered for, or had, overseas service; (ii) be a member or ex-member of the defence forces who has served at least for three years continuous service after 7 December 1972; or (iii) be a National Serviceman who completed the period of service for which he was deemed to have been engaged to serve, on or after 7 December 1972. Also, neither the applicant nor his spouse must be the owner of a home at the time of seeking a loan. The following table shows details of Defence Service Homes activities in the provision of finance for Tasmanian housing. Transfers of loans (and houses) between borrowers are not shown as expenditure, nor are details given of additional loans advanced for alterations, etc., to homes already subject to Defence Service Homes finance.

Defence Service Homes Operations: Homes Financed in Tasmania

Year	Loan applications approved (a)	Homes financed			Expenditure
		Homes purchased (b)	Homes built	Mortgages taken-over (c)	
	no.	no.	no.	no.	\$'000
1972-73	203	153	17	47	2 050
1973-74	301	224	7	48	3 200
1974-75	256	190	5	54	3 220
1975-76	195	126	17	58	2 795
1976-77	125	70	8	42	1 882
1977-78	126	79	16	32	1 807

(a) Loan applications *approved* are not necessarily paid out in the same year. A transfer from one borrower and a resale to another is included as a loan approved but not included elsewhere.

(b) New or existing properties not previously subject to Defence Service Homes finance.

(c) Mortgages, raised by individuals to build homes, taken over by Defence Service Homes on satisfactory completion of the home.

Homes Savings Grant Scheme

Under the Federal *Homes Savings Grant Act 1976*, a grant is payable to people who, on or after 1 January 1977, contract to buy or build, or commence to construct, their first home in Australia. Persons contracting for their first homes during 1977 could receive a grant of up to \$667 depending upon their savings. A maximum grant of \$1 333 applied from 1 January 1978 and \$2 000 was to apply from 1 January 1979.

People who acquired their home on or before 31 December 1976 may be eligible under the *Homes Savings Grant Act 1964* which provides for the payment of grants to young married couples who acquired homes valued at no more than \$22 500.

The following table gives details for recent years of grants made under the *Homes Savings Grant Acts 1964 and 1976*:

Home Savings Grants in Tasmania

Year	Number of applications		Value of grants approved (\$'000)
	Received	Approved	

HOME SAVINGS GRANT ACT 1964

1972-73	1 478	1 451	716
1973-74	1 485	1 410	824
1974-75	1 084	1 062	628
1975-76	836	796	477
1976-77	467	395	239
1977-78	74	74	43

HOME SAVINGS GRANT ACT 1976

1976-77	434	390	250
1977-78	1 736	1 644	1 270

Housing Loans Insurance Corporation

The Housing Loans Insurance Corporation was established by the *Housing Loans Insurance Act 1966* to administer the Federal Government's Housing Loans Insurance Scheme under which approved lenders may be insured against losses arising from the making of housing loans. An amendment to the Act in 1977 broadened the scope of the Corporation's activities and, in addition to loans for the purchase or construction of homes for owner occupancy, loans for the purchase of vacant land and commercial housing propositions became insurable.

Owner occupancy loans are insurable without limit on loan amount, interest rate or term. Loans for the purchase of vacant land are insurable where the borrower intends to erect his home at a later date. In the commercial field loans for rental housing ranging from single houses or home units to multi-storey structures, together with loans for the purchase and development of land and the building of project housing including home units, are acceptable.

A once only premium is charged by the Corporation at the time a loan is made. With owner occupancy loans comprising 94 per cent and 95 per cent of the valuation of a home the premium is 1.4 per cent of the amount of the loan. Loans from 95 per cent to 100 per cent of valuation carry a loading of 10 per cent on the 1.4 per cent rate. On loans of less than 94 per cent of valuation, the premium falls progressively down to 0.25 per cent on loans of less than 76 per cent of valuation. Premium rates for the purchase of vacant land are as for home ownership plus a loading of 10 per cent and attractive rates apply to commercial housing loans.

The Corporation will insure a loan made to enable a borrower to buy or build a house, to buy a home unit, or to discharge an existing mortgage. Loans for alterations and extensions and loans to meet expenses of providing or improving lighting, sewerage, drainage, fences, roads etc. are also insurable. In addition to loans secured by a registered first mortgage, there is provision for the insurance of second mortgage loans and cover is available for either full-term, fixed-term or five-year loans.

The following table shows the number of loans insured, their purpose and amount, during the past three years:

*Housing and Building***Housing Loans Insurance Corporation
Loans Insured in Tasmania**

Purpose of loan	1974-75		1975-76		1976-77	
	Number	Amount (\$'000)	Number	Amount (\$'000)	Number	Amount (\$'000)
Housing—						
Building a new house	47	854	69	1 504	149	3 618
Purchase of—						
New house	78	1 425	115	2 571		
Established house	1 009	13 824	1 111	19 074	928	18 903
Discharge of mortgage	39	599	37	605	16	307
Home Units	37	655	38	712	37	793
Other	10	159	13	248	—	—
Total	1 220	17 516	1 383	24 714	1 110	23 621

Further References

ABS Publications produced by the Tasmanian Office

Building Industry, Tasmania (8701.6) (annual, 1976-77 issue released 22.11.77)

Building Approvals, Tasmania, Monthly Bulletin (8702.6) (monthly, May 1978 released 5.7.78)

Building Statistics, Tasmania, Quarterly Bulletin (8703.6) (quarterly, March Quarter 1978 released 18.7.78)

ABS Publications produced by the Canberra Office

Building Statistics (8705.0) (quarterly, March quarter 1978 released 4.10.78)

Population and Dwellings in Local Government Areas and Urban Centres (Preliminary, 1976 Census of Population and Housing), Tasmania (2406.0) (released 15.11.77).

Chapter 14

EDUCATION AND CULTURAL ACTIVITIES

SCHOOL EDUCATION

Introduction

In 1869 Tasmania became the first Colony in the British Empire to make education compulsory. The ages for obligatory attendance at school were progressively widened: in 1898 school attendance was made obligatory between the ages of seven and 13 years; in 1912 between six and 14 years; and in 1946 Tasmania became the only Australian state to make attendance compulsory up to the age of 16, the starting age being six.

Education in Tasmania is now provided at primary, secondary and tertiary levels by government institutions and to secondary level by non-government schools.

A period of 82 years in which the State accepted no financial responsibility for non-government education ended in 1967 when amendments to the *Education Act* 1932 allowed government grants to independent schools. The assistance is paid on a capitation basis and is dependent upon the level of schooling of the pupil.

The task of Tasmanian educational authorities, as in other Australian states in the post-war period, has been to provide more schools, more teachers and better facilities; the principal factors exerting pressure have been: (i) a rapidly growing school population; (ii) a change in attitude resulting in increased demand for secondary and tertiary education; and (iii) community acceptance in general of the need for better education. A feature of recent years has been the acceptance of greater financial responsibility by the Federal Government in a field which was once exclusively the concern of the State.

The remainder of this section on school education covers the following:

- (i) the State (or Government) school system;
- (ii) the non-government (or independent) schools;
- (iii) teachers and teacher training;
- (iv) examination and Schools Board moderation procedures; and
- (v) functions of the Education Department relating to equipment, libraries, etc.

Schools, Government and Non-Government

In 1946 the Tasmanian Government and non-government systems of education were reorganised to provide a three, four or five-year post-primary course. (The pre-war system of secondary education had comprised two stages, a three-year course followed by a two-year course; with a leaving age of 14, and with *selective entry* to government high schools. The proportion of pre-war pupils taking secondary education was very low.)

The dual nature of educational responsibility in Tasmania and the numbers of pupils in both government and non-government schools, in primary and secondary grades, are shown in the following table:

Government and Non-Government Schools
Pupils Enrolled at 1 August According to Grade of Education
(Number)

Particulars	1973	1974	1975	1976	1977
Government schools—					
Primary grades (a)	49 845	49 515	49 976	50 091	50 358
Secondary grades	28 935	29 347	30 042	30 183	29 616
Special (b)	925	973	899	908	898
Total	79 705	79 835	80 917	81 182	80 872
Non-government schools—					
Primary grades	7 882	7 973	8 204	8 183	8 168
Secondary grades	6 342	6 426	6 393	6 221	6 258
Special	13	8	—	27	20
Total	14 237	14 407	14 597	14 431	14 446
Total all schools	93 942	94 242	95 514	95 613	95 318

(a) Includes kindergarten classes; see text below.

(b) Includes pupils in special classes attached to ordinary schools.

Kindergarten Classes and Preparatory Classes

In this chapter, the term *kindergarten* is used to describe all pre-school classes, irrespective of whether they operate attached to other schools or whether they operate as separate entities. Separate figures are shown in a later table for enrolments in kindergartens. *Preparatory* classes, commenced in 1974, are included in 'Primary grades'.

The State (or Government) School System

Introduction

The present system had its genesis in the *Education Act* 1885, under which a department was established, headed by a Director of Education, responsible to a Minister. Under the Act, aid to non-government schools was abolished and only in 1967 was this principle re-introduced (with a system of capitation subsidies).

Education is compulsory between the ages of six and 16 years although, in some cases, special exemptions may be obtained. With two exceptions, all schools are co-educational. Education is secular and free; parents buy their children's books, paints, instruments, etc. Pupils' transport is either provided by the Department or subsidised where daily travel costs on public transport exceed 30 cents. The arrangement of transport has been important in the organisation of district and high schools where educational facilities are concentrated and centralised, thereby eliminating many of the smaller country schools.

Present Organisation

Under a Director-General operate three Directors designated: (i) primary; (ii) secondary; and (iii) technical. Regional directors and superintendents are responsible for specific districts; supervisors assist in administration and provide services to schools. Specialist sections deal with curricula, teaching aids, science equipment, speech education, music, physical education, guidance and welfare, library services, educational planning and research, etc.

Expenditure on Education

The following table shows educational expenditure by the State Government from the public account; expenditure from Trust Funds is made by the State acting mainly as agent for the Federal Government.

Expenditure on Education from Consolidated Revenue, Loan Fund and Trust Funds
(\$'000)

Particulars	1974-75	1975-76	1976-77
From Consolidated Revenue—			
General administration, regulation and research	3 479	4 681	5 332
Student transport	3 347	3 930	4 394
Primary and secondary	53 238	67 351	75 880
Technical	4 841	6 128	7 586
University	13	18	10
Other higher education	3 460	4 753	6 031
Special schools	1 828	1 682	2 097
Other	1 371	680	1 533
Total	71 576	89 223	102 863
From Loan Fund—			
General administration, regulation and research	3 922	5 953	9 415
Primary and secondary (including pre-school)	14 370	18 062	15 181
Technical	188	1 424	4 539
University	—	—	—
Other higher education	—	—	—
Adult education	40	31	162
Special schools	16	320	520
Total	18 536	25 792	29 817
From Trust Funds—			
General administration, regulation and research	27	17	17
Primary and secondary	4 673	3 990	3 208
University	13 992	16 380	17 238
Other higher education	11 442	12 565	9 764
Adult education	663	974	22
Other	310	465	487
Total	31 108	34 391	30 736
Grand total	121 220	149 406	163 416

It should be noted that the preceding table includes amounts voted under other departmental heads for the provision of educational facilities, principally rental and tenancy charges and water, sewerage and other rates paid by the Lands Department.

Enrolment

Enrolments in Government schools for the last five years were:

Government Schools
Number of Pupils at 1 August

Pupils	1973	1974	1975	1976	1977
Boys	41 318	41 299	41 712	41 806	41 628
Girls	38 387	38 536	39 205	39 376	39 244
Total	79 705	79 835	80 917	81 182	80 872

Age of Pupils in Each Class

The following table summarises the system of government schooling in Tasmania showing the average ages of pupils in each grade and the type of certificate issued for final year examinations:

Government Schools
Average Ages of Pupils, Primary and Secondary, in Each Grade, and Certificates Issued

Primary classes			Secondary classes			
Grade	Mean age at 1.8.77		Grade	Mean age at 1.8.77		Certificate issued
	Years	Months		Years	Months	
Kindergartens—						
Separate	4	11	7 ..	12	9	
Attached	5	2	8 ..	13	10	
Preparatory	5	9	9 ..	14	9	Preliminary School Certificate
1	6	9				
2	7	9	10 ..	15	9	School Certificate
3	8	9	11 (a)	16	10	Higher School Certificate
4	9	9	12 (a)	18	0	
5	10	9				
6	11	9				

(a) Secondary grades eleven and twelve indicate pupils in their first or second year at Higher School Certificate level.

Number of Government Schools

The following table shows the number of government schools in Tasmania:

Number of Government Schools at 1 August

Type of school	1972	1973	1974	1975	1976	1977
Kindergartens (separate)	41	39	34	38	34	33
Primary (a)	144	148	155	153	154	156
Primary with secondary classes	8	2	1	—	—	—
Special (b)	16	17	18	18	19	18
Area (c)	34	—	—	—	—	—
District (c)	6	39	36	37	37	35
High	30	30	30	32	33	35
Matriculation colleges	3	5	5	7	7	7
Total	282	280	279	285	284	284

(a) Many have kindergartens attached.

(b) Includes the correspondence school.

(c) These schools provide both primary and secondary facilities. From 1973 'area schools' became 'district schools'.

Kindergarten Education

Until 1969, pre-schools were established on the initiative of groups of parents, the Department providing the cost of the building but eventually recovering half its outlay from the parents. Commencing in 1969, all new facilities for pre-school education were provided in kindergartens attached to primary schools.

At present, there is a mixture of pre-school facilities, some being provided at primary schools, and others constituting separate entities. Pupils at this level of education are shown in the next table:

Enrolments in Kindergartens at 1 August

Particulars	1973	1974	1975	1976	1977
Kindergartens—					
Separate	1 714	1 449	1 628	1 486	1 398
Attached	5 277	4 538	4 957	5 163	5 224
Total (a)	6 991	(b) 5 987	6 585	6 649	6 622

(a) Included in other tables as part of total government school enrolments.

(b) See text that follows for explanation of decrease.

State Primary Schools

General: As mentioned earlier, a preparatory grade was introduced to some schools in 1974. This extra grade will be provided in all primary schools as staffing and accommodation allow. Thus, in future there will be seven primary grades plus kindergarten. The approximate age of entry is four years to kindergarten, five years to preparatory and five and a half to six years to grade 1, at 1 January of each year.

Primary Classes: Most primary schools have six grades, a kindergarten and, increasingly, a preparatory class. Generally parents may select the school they prefer for their children without restriction but, in some areas, zoning directs children to attend a particular primary school.

In addition 35 district schools have primary grades and draw many pupils from outlying localities. Free transport has made this possible and has led to a reduction in the total number of primary schools.

Primary Pupils: The table below shows the ages and numbers of pupils receiving primary education in Tasmanian Government schools:

Ages and Numbers of Pupils Receiving Government Primary Education (a) at 1 August

Age last birthday (years)	1973	1974	1975	1976	1977
Under 5	2 054	1 888	2 260	2 392	2 633
5	5 418	6 034	6 145	6 456	6 356
6	6 219	6 511	7 019	6 749	7 034
7	6 341	6 289	6 522	6 953	6 828
8	6 502	6 287	6 436	6 736	6 934
9	7 098	6 647	6 320	6 369	6 631
10	7 036	6 939	6 352	6 186	6 260
11	6 972	6 724	6 856	6 269	5 954
12	2 048	2 049	1 960	1 869	1 644
13	140	124	98	108	83
14	11	13	6	4	—
15 and over	6	10	2	—	1
Total—Boys	24 797	25 613	25 711	25 822	25 892
Girls	25 048	23 902	24 265	24 269	24 466
Pupils	49 845	49 515	49 976	50 091	50 358

(a) Includes kindergarten classes.

Primary Curriculum: The primary school curriculum has undergone considerable change in recent years, both in teaching methods and subject matter. The subjects are English (including reading, spelling, oral and written work), social science, arithmetic, science, art, music, arts and crafts, religious and moral education, and health and physical education.

Pupil Grouping: Promotion within the schools is generally by age at the beginning of the school year, with accelerated progress or repetition of classes at the principal's discretion; grouping may be by ability, where numbers allow, with each child being able to work with his equals in each subject, regardless of age. Differential teaching adapts the school program to meet the widely varying needs and abilities of pupils. The skill subjects of reading, writing, spelling and arithmetic are particularly suited to this method of teaching, testing and grading. The increasing provision of specially designed open plan areas housing two, three or four classes in the space available, provides opportunity for teachers to work as a team and assist in the treatment of individual differences in pupils. Schools now being erected or planned provide both dual and single classrooms. Some schools have experimented with *non-grading*, a method of organisation which allows pupils in certain subjects to work at their own level of competence; some have adopted family grouping, where children of different ages are in one classroom.

Special Schools and Special Classes

The Department has special schools, and also special and remedial classes in ordinary schools, for children who are physically handicapped, mentally retarded, or otherwise unable to profit from ordinary class teaching. Instruction varies according to the handicap; where it is physical, the main need is to maintain normal or near-normal individual programs. Many pupils eventually can be transferred to ordinary schools into the grades appropriate to their ages.

Schools and classes for slow learners and mentally retarded children follow the curricula for kindergartens and primary schools but no attempt is made to reach examination standards. The teaching of activities and basic skills is the main concern in these classes which are also to be found in some primary and high schools.

Government Secondary Schools

Almost all children attend secondary classes, starting at an age varying from 11½ to 13 years. If a choice has to be made between a high and a district school a transfer committee considers the matter, taking note of performance in grade 6. High schools are non-selective, comprehensive and, with two exceptions, co-educational.

The differences between the types of secondary schools are related mainly to the level of the final examination or certificate available to students. The levels are: School Certificate endorsed Preliminary (three-year course); School Certificate (four-year course); Higher School Certificate (five or six-year course). The School and Higher School Certificates replaced the Secondary Schools, Schools Board and Matriculation Certificates which were last awarded in 1968.

The essence of the present system is: (i) all assessment and certification come under the authority of the Schools Board of Tasmania; (ii) two certificates only are issued; and (iii) the certificates record achievement in individual subjects. The certificates are:

The School Certificate: Awarded in subjects for three and four-year courses; basis of award is by internal assessment and recommendation by schools.

The Higher School Certificate: Awarded in subjects studied in fifth or sixth secondary year; basis of award is internal assessment and an external examination conducted by the Board. The University is free to determine what constitutes qualification for university entrance and can nominate the subjects and the levels of achievement at the Higher School Certificate examination necessary for entry; some subjects are not designed primarily for purposes of university entrance.

A more detailed account of the examinations and procedures adopted for awarding the School and Higher School Certificates is contained in a later section, 'Examinations'.

The following table shows the age and number of students in Tasmanian Government secondary schools:

Pupils Receiving Government Secondary Education at 1 August, by Age

Age last birthday (years)	1973	1974	1975	1976	1977
11.....	261	246	235	188	159
12.....	4 902	4 943	4 977	4 920	4 687
13.....	6 924	7 137	6 710	6 623	6 539
14.....	6 787	6 848	7 177	6 971	6 723
15.....	5 640	5 792	6 101	6 630	6 356
16.....	2 645	2 671	2 742	2 993	3 073
17.....	1 284	1 231	1 382	1 240	1 408
18 and over.....	492	479	718	618	771
Total—Boys.....	14 928	15 067	15 420	15 414	15 179
Girls.....	14 007	14 280	14 622	14 769	14 437
Pupils	28 935	29 347	30 042	30 183	29 616

The next table shows the number of secondary pupils by sex and grade in all government schools:

Secondary Pupils in Government Schools at 1 August, by Grade

Year	Secondary grade						Total
	7	8	9	10	11	12	
Boys							
1973.....	3 736	3 565	3 305	2 642	890	790	14 928
1974.....	3 795	3 693	3 299	2 609	942	729	15 067
1975.....	3 607	3 760	3 521	2 726	936	870	15 420
1976.....	3 602	3 575	3 576	2 925	907	829	15 414
1977.....	3 390	3 604	3 458	2 979	902	846	15 179
GIRLS							
1973.....	3 473	3 365	3 124	2 458	912	675	14 007
1974.....	3 438	3 469	3 186	2 530	1 000	657	14 280
1975.....	3 313	3 429	3 341	2 701	1 071	767	14 622
1976.....	3 317	3 319	3 292	2 850	1 180	811	14 769
1977.....	3 149	3 289	3 177	2 814	1 134	874	14 437

District Schools

Area schools, first established in 1935, were replaced by district schools from the beginning of 1973. The area schools were designed to serve rural areas; however, changing concepts of education and parental demands for a higher level of education more closely related to the levels provided by high schools, led to an upgrading of the level of education offered at country secondary schools and to the creation of district schools.

Subjects for the School Certificate are available to pupils in all district schools and high schools.

Government Matriculation Colleges

At matriculation colleges students are exclusively concerned with Higher School Certificate subjects undertaken as one or two-year courses. The first such college was the Hobart Matriculation College (previously Hobart High School)—no junior students were enrolled after 1961 and by 1965 all students were attempting matriculation. In 1967 Launceston High reached this stage and in 1968 the Elizabeth Matriculation College, in Hobart, was opened and elimination of junior students was completed by 1970. In 1973 the newly constructed Rosny College was opened to serve the eastern shore suburbs of Urban Hobart and the new Don College was opened at Devonport. (The three earlier matriculation colleges had resulted from conversion of existing high schools.) Alanvale College at Launceston was opened in 1975 while the new Hellyer College at Burnie was opened in 1976 to replace Higher School Certificate classes previously available at Burnie High School. As many students do not attempt to matriculate, the word 'matriculation' is not used in the names of the new colleges.

The advantages claimed for these colleges is that they concentrate, in the one centre, teachers who are specialists; further the students benefit to the extent that the colleges are an intermediate step between the more disciplined high school and the university.

Correspondence School

In 1975, the External Studies Section of the Division of Technical and Further Education took over the work of the Correspondence School. The section offers education by correspondence at primary level, in some School Certificate subjects, some Higher School Certificate subjects and some Technical and Further Education courses.

Non-Government (or Independent) Schools

Non-government schools have played a valuable part in Tasmanian education. Policies are framed by principals in conjunction with their senior staff and with the approval of their governing bodies or church.

Registration

Non-government schools and teachers are subject to the regulations of the Teachers and Schools Registration Board. This Board consists of nine members who hear and determine all applications for registration and keep a record of all teachers and schools not administered by the Education Department. Every school is graded and teachers are registered in one or more classifications or as special subject teachers. 'Provisional' teachers are those gaining qualifications so they can be registered. The Board may prescribe the mode of classifying teachers, the course of study and training required, the examinations to be passed, and the recognition of overseas qualifications. To secure registration, schools must provide for proper access, drainage, light, ventilation and sanitary conveniences, and inspections may be made by officers appointed by the Board. A daily register of attendance has to be kept.

State Assistance to Non-Government Schools and Pupils

The *Education Act 1932* was amended in 1967 to provide for direct payments to non-government schools. The amount paid is based on the number of pupils enrolled at 1 August each year. The 1976-77 expenditure was \$1 919 000, which included a special grant of \$1 506 000. From the beginning of 1970, the Federal Government also provided per capita grants to independent schools. Details are contained in a later section dealing with Federal Government activities in education. State legislation passed in June 1970 provides for subsidies related to building loans interest. The amount of subsidy paid in 1976-77 was \$250 000.

Apart from these subsidies, benefits include: free or subsidised transport; use of the facilities of the Department's curriculum centre, the media centre, and speech education and guidance branches; attendance at trade and domestic science classes if room is available; and attendance by teachers at Departmental schools of method. Equipment can be purchased through the Supply and Tender Department.

Enrolment at Non-Government Schools

Most non-government school pupils are in schools controlled by religious denominations, as the next table shows:

**Non-Government Schools and Pupils at 1 August
(Number)**

Particulars	Church of England	Presbyterian (a)	Catholic	Seventh-day Adventist	Other schools	All schools
PUPILS						
1973..... Boys	852	247	4 633	64	999	6 795
Girls	706	325	5 211	62	1 138	7 442
1974..... Boys	875	257	4 651	76	1 066	6 925
Girls	734	349	5 129	76	1 194	7 482
1975..... Boys	895	226	4 675	71	1 150	7 017
Girls	818	351	5 156	72	1 183	7 580
1976..... Boys	889	211	4 723	85	1 038	6 946
Girls	805	331	5 113	86	1 150	7 485
1977..... Boys	906	213	4 680	92	1 016	6 907
Girls	807	341	5 204	77	1 110	7 539
SCHOOLS						
1977.....	4	2	39	4	22	71

(a) Now Uniting Church of Australia.

The following table shows the number of secondary pupils by sex and class in all non-government schools:

Secondary Pupils in Non-Government Schools, by Year, at 1 August 1977

Pupils	Secondary year						Total
	1	2	3	4	5	6	
Boys	600	642	588	562	290	195	2 877
Girls	709	703	750	704	317	198	3 381
Total	1 309	1 345	1 338	1 266	607	393	6 258

Of the 24 schools in 1977 which catered for secondary pupils, 17 had Higher School Certificate classes.

Most independent school pupils are to be found in primary classes, and most of them are in Catholic schools. The following table shows the numbers and ages of all pupils in non-government school primary and sub-primary classes:

Pupils Receiving Non-Government Primary Education at 1 August, by Age

Age last birthday (years)	1973	1974	1975	1976	1977
Under 7	2 363	2 496	2 773	2 737	2 603
7	857	946	938	1 039	1 079
8	1 000	906	988	997	1 061
9	1 037	1 044	977	960	1 061
10	1 098	1 090	1 072	1 020	1 040
11	1 131	1 112	1 106	1 091	1 005
12	367	346	319	312	302
13	26	29	28	25	16
14	3	4	3	2	1
Total—Boys	3 750	3 903	4 056	4 024	4 018
Girls	4 132	4 070	14 148	4 159	4 150
Pupils	7 882	7 973	8 204	8 183	8 168

The following table shows the ages of pupils in non-government schools at secondary level:

Pupils Receiving Non-Government Secondary Education at 1 August, by Age

Age last birthday (years)	1973	1974	1975	1976	1977
11	107	97	84	101	76
12	1 051	1 063	1 059	991	980
13	1 283	1 343	1 362	1 266	1 322
14	1 337	1 341	1 344	1 415	1 367
15	1 214	1 231	1 174	1 234	1 268
16	799	816	866	732	809
17	442	443	425	403	381
18 and over	109	92	79	79	55
Total—Boys	3 045	3 022	2 961	2 913	2 877
Girls	3 297	3 404	3 432	3 308	3 381
Pupils	6 342	6 426	6 393	6 221	6 258

Teachers and Teacher Training

There is a variety of courses available to trainee teachers in this State. The University of Tasmania awards the Diploma of Education after one year of a post-graduate course in which graduate students train as infant, primary or secondary teachers. Since 1975, a four-year course leading to the degree of Bachelor of Education has been provided and a Master's

The following table shows the number of teachers and instructors in Tasmanian Government schools (excluding technical colleges):

Number of Government School Teachers and Instructors at 1 August 1977 (a)

(b) Includes correspondence school.

Full-Time Teaching Staff in Government Schools (a) and Teachers-in-Training at 1 August

(a) Includes teachers in non-teaching positions (e.g. curriculum branch staff, guidance officers, etc.) but excludes supervisors, those engaged in teacher training and technical education, part-time teachers, and those on long service leave.

In primary schools in 1977, 80 per cent of the teachers were females. All subjects are taught by each teacher in these schools but itinerant teachers, when available, take physical education, music and speech classes on a circuit basis with each teacher being responsible for the teaching of the subject in several schools. In the post-primary schools, most teachers are specialists attached to subject departments within each school. In the smaller district schools, one teacher may take several subjects; rural science, home arts and crafts and technical subjects are handled by resident or itinerant specialists as available.

Teacher Training: The institutions where teachers-in-training are studying are shown in the next table:

Teachers-in-Training at 1 August

Institution attended	1973	1974	1975	1976	1977
MALES					
University of Tasmania	244	237	217	224	207
Tasmanian College of Advanced Education	229	227	217	218	251
Other institutions	-	1	1	3	4
Total	473	465	435	445	462
FEMALES					
University of Tasmania	308	344	364	411	389
Tasmanian College of Advanced Education	686	704	752	772	804
Other institutions	3	12	14	20	22
Total	997	1 060	1 130	1 203	1 215

Examinations

The Schools Board

The Schools Board of Tasmania was constituted on 31 October 1944 by the *Education Act 1944* to devise and govern new systems of awarding school certificates.

In 1946 the school leaving age in Tasmania was raised to 16 years and the Board instituted a four-year course of academic secondary education leading to the Schools Board Certificate. The Intermediate Examination, which had been conducted by the University at third-year secondary school level until 1938, had been replaced by similar examinations conducted by the State Education Department and the Associated Public Schools. These were replaced in 1946 by the Schools Board Certificate, studied at fourth-year level.

The Schools Board Certificate demanded a level of achievement in basic and optional subjects after a four-year course of general education. Secondary schools were allowed the choice between an accrediting system or an external examination.

As a result of the proposals of the Schools Board and the Radford Report, the Schools Board was re-constituted with a membership of 21 on 1 September 1966, to allow the Board to become, in 1969, the sole examining and certifying body at the secondary level. A further amendment to the Act in 1974 made provision for the Council of Advanced Education to nominate members, and increased the membership of the Board to 23 as from 1 July 1974.

An important change of considerable significance to employers, and to the prerequisites they demand of applicants for employment, occurred when new types of certificates were introduced in 1969. There are only two such certificates issued, known as the *School Certificate* and the *Higher School Certificate*. These replaced all previous certificates which were group certificates demanding, in varying degrees of detail, certain compulsory subjects or groups of subjects as prerequisites to the award of the certificate. The essential difference is that both of the new certificates are *subject* certificates requiring no compulsory subjects or groups of subjects to be studied.

For the School Certificate there are no external examinations and awards are determined by internal assessment with a wide variety of methods of evaluation. A system of regional moderation (*see later section*) has been implemented by the Schools Board to ensure comparability of standards between schools. Final results of the School Certificate are notified to candidates in December by the principal of the school attended by the candidate. Each candidate receives a printed result slip showing the level of study and the award given in each subject. The formal certificate is issued by the Schools Board of Tasmania during the following year.

The School Certificate

The subjects for this certificate may be taken at various levels and a wide choice is available to cater for different levels of ability and interests. A preliminary award may be granted after the third year of secondary education to those candidates who leave school at this stage. The full award is granted to successful candidates who complete four years of study.

The Higher School Certificate

This is taken at the end of the fifth or sixth year of secondary education. The certificate is awarded as a result of examinations conducted in November or December each year. Subjects may be studied at Level I, Level II or Level III, but all levels are not necessarily available for all subjects. Requirements for matriculation are determined by the University of Tasmania from the results of the Higher School Certificate examinations conducted by the Schools Board of Tasmania in certain Level III subjects.

In some Level III subjects awards are determined solely on the basis of an external examination. In other Level III subjects awards are determined by the use of an external examination component together with a school assessment component. The Schools Board has ruled that the school assessment component may provide a maximum of 50 per cent of the total result, but the actual proportion of this component to be used for each subject is determined by the Schools Board on the recommendation of the appropriate subject committee. Where an internal assessment component exceeds 10 per cent of the total result, the Board has ruled that the school assessments for each class must be standardised against the external examination results of the members of that class. In Level I and Level II subjects, awards are determined by the candidate's school after the school has taken part in a consultative system, which aims to provide comparability in standards between schools in the subject. The Board appoints a Subject Adviser in each subject field. The Subject Advisers are responsible to the Schools Board for the co-ordination of assessment procedures in their particular subject field and for ensuring that satisfactory standards are maintained.

Moderation

The Schools Board of Tasmania, as the body responsible for awarding the secondary school awards (the School and Higher School certificates), is also responsible for ensuring development of satisfactory moderation procedures and the maintenance of subject standards. To this end, the State is divided into seven *moderation regions*. Moderation is the method used to ensure reasonable comparability of standards between schools throughout the State. Moderation involves a number of moderation bodies, whose members include members of the Schools Board, superintendents of high schools, high school principals and other high school staff. (Moderation procedures are covered in greater detail in the 1977 *Year Book*.)

Other Education Matters

Various functions of the Education Department are described in the following section; some of these are applicable to both government and non-government schools.

Equipment, Services and Other Resource Materials

The Tasmania Media Centre provides specialised assistance to schools by the development, production and supply of audio-visual hardware and software.

Almost all government schools are equipped with colour television receivers. To overcome the difficulty in planning timetables so that classes may view educational broadcasts, all secondary schools and colleges, all district high schools, and 18 per cent of

primary schools have been provided with video recording systems. The system is based on the mobile video cassette recorder which allows schools to record television broadcasts 'off-air' for replaying at convenient times and locations. This development has led to television being as flexible a teaching aid as the longer established pre-recorded radio program.

The Tasmania Media Centre records all A.B.C. radio broadcasts and distributes copies of tapes to schools each week. The Centre also operates a Media Library. Similar resources are available at the Centre's two annexes at Launceston and Burnie.

The Centre's electronics section prepares specifications, evaluates, develops and modifies audio-visual hardware. All approved equipment supplied to government schools is maintained free of cost by the Tasmania Media Centre.

The Centre also co-ordinates the production of integrated resource materials to support areas of the school curriculum. Other services offered to schools by the Centre include in-service training of teachers in the operation and maintenance of equipment, and the production or modification of resource materials; advice on the organisation and management of resources; and the provision of two mobile media vehicles for in-service education of teachers at schools which have inadequate access to the Centre or its annexes.

Libraries

A significant development program in this field has been implemented in recent years, particularly in the high schools and matriculation colleges where substantial print and audio-visual resource collections have been built up in attractive and spacious library suites. Teacher-librarians are now appointed to the larger primary and district schools. Grants are made directly to schools on a per capita basis for the purchase of library resources.

The introduction of a post-graduate course in librarianship at the Tasmanian College of Advanced Education has made possible the recruitment and training of up to 15 new teacher-librarians each year.

The Library Services Branch, under the direction of a supervisor of libraries, offers expert bibliographic and technical advice to schools and controls a central cataloguing service to schools.

Radio and Television Programs

Tasmania is well advanced in the availability and use of educational television and radio broadcasts. The Australian Broadcasting Commission provides programs which are selected by planning and appraisal committees upon which curriculum officers and teachers are represented. To facilitate the production of Tasmanian programs and the selection of programs from other sources the A.B.C. employs a State Supervisor of Education, radio and television producers, and associated staff. The Education Department provides a Secondary and a Primary liaison officer seconded full-time to the A.B.C.

Safety Officers

Transport Commission officers visit the schools regularly to give lectures and practical demonstrations dealing with various aspects of road safety. Driver education courses are given in some schools, a type of training likely to be extended. Periodically, students are reminded of the dangers associated with explosives, fire-arms and drug abuse.

Parents and Friends Associations

One of the functions of these bodies is fund-raising for the provision of subsidised equipment, materials and books. They also act as a valuable forum for discussions on education and this role is assuming greater importance.

Migrant Education

This is arranged by the Department at certain schools or by combined radio-correspondence lessons to teach English to migrants. The cost of migrant education is reimbursed by the Federal Government. The Department has separate branches to provide assistance, mainly in English language learning, for both child and adult migrants. (See also 'Federal Government Activities in Education'.)

Financial Assistance

Currently the principal forms of assistance payable to parents or guardians of students are:

- (i) *School Certificate Allowances* payable to parents or guardians of full-time students undertaking their fourth year of secondary education. The allowance, subject to a means test, amounts to \$100 per annum. The number granted during 1977 was 235 and expenditure was \$23 000.
- (ii) *Special Bursaries* awarded in cases of necessitous circumstances. For 1977, 168 special bursaries involving expenditure of \$9 957 were awarded.
- (iii) *Loan Issue Supplies* provided to assist parents who are unable to meet the cost of text books, materials and subject levies associated with educating their children. Expenditure under this scheme during 1977 was \$170 584.

TECHNICAL AND ADULT EDUCATION**Technical and Further Education**

The Education Department administers Technical Colleges at Hobart, Launceston, Devonport, Burnie and Queenstown which provide trade, technical and sub-professional technician courses. Some students also receive tuition at Rosebery and Smithton using the high school facilities. Technical College courses cater for students who are above the age of compulsory school attendance.

On 12 October 1976, the Minister for Education, Recreation and the Arts announced the dissolution of the Board of Technical Education. Its functions were subsequently taken over by the new advisory Technical and Further Education Co-ordinating Committee. The Technical and Further Education (TAFE) Division of the Education Department is headed by the Deputy Director of Schools and Colleges (TAFE).

Courses

Certificate Courses: These courses cater for middle level vocations that lie between trades and professions. They are designed in consultation with industry to meet the increasing need for sub-professional personnel who are performing many tasks previously carried out by university graduates or diplomates. On successful completion of a course, a certificate is awarded by the Education Department. Courses provided include drafting, engineering, surveying, architecture, building, commerce, business studies, marketing and food services.

Trade Courses: These courses combine theoretical and practical aspects of the trade, and are complementary to employer training given to apprentices. From 1965 apprentices have been required to attend one full day per week for three years and this has practically eliminated evening classes for apprentice training. Since 1968 a system of block training has operated in respect of a number of trades and for apprentices previously taught by correspondence. During the year, periods of two weeks are spent in full-time study in a technical college. On successful completion of the course, a Certificate of Trade Proficiency is awarded. Post-trade courses are available to extend the skill and knowledge of the tradesmen.

Correspondence Tuition: This is administered through the Hobart Technical College and is intended for isolated students. Many apprentice correspondence courses have been replaced by the system of block training.

Teacher Education: TAFE teacher education courses are available to teachers on a part-time basis and cover general teaching theory and the theory and method of trade teaching. The total number of teacher students enrolled in TAFE teacher education during 1976 was 141.

Technical In-Service Education: Non-formal staff development programs are organised by the Technical In-Service Education Committee. These are geared specifically to the needs of teaching and ancillary staff in Tasmanian technical colleges.

Examinations

These are conducted by the Education Department in July and November each year. Papers are set and marked, or assessments carried out on a Statewide basis except for the first and second year trade subjects in which case each college makes its own arrangements.

Technical Teachers, Students and Expenditure

The following table shows the number of schools, teachers and students in technical education and the yearly expenditure for recent years:

Technical Education: Teachers, Students and Expenditure

Particulars	1972 (a)	1973 (a)	1974	1975	1976
Schools, colleges, etc. no.	7	6	7	9	10
Teachers—Full-time no.	172	194	258	294	(b) 335
Part-time no.	394	513	653	572	(c) 735
Students (d) no.	7 234	7 519	9 826	10 254	11 155
Expenditure (e) \$'000	2 607	3 004	3 667	5 775	6 007

(a) Excludes details for diploma courses provided as a part of the advanced education system. All such courses had been transferred to the College of Advanced Education by 1974.

(b) 272 males and 63 females.

(c) 578 males and 157 females.

(d) Gross number enrolled during the year.

(e) Excludes capital expenditure on new buildings, etc.

Adult Education*Origin and Organisation*

Establishment of a mechanics' institute in Hobart in 1827 was the start of adult education in Australia. The mechanics' institute movement which was then just three years old (there were only two other institutes at that time: in London and Glasgow) was the fore-runner of the present adult education organisation in Tasmania which began in 1914.

From 1948 to 1975 adult education was administered by a statutory board established under the *Adult Education Act* 1948. From 1 January 1976, the *Education Act (No. 2)* 1975 came into force, which proclaimed an advisory Adult Education Board and a Division of Adult Education within the Education Department. The new Board consists of 11 members; six nominated by the Minister for Education and one each nominated by: the University of Tasmania; the Tasmanian College of Advanced Education; the Board of Technical Education; the Director-General of Education; and the Professional Adult Education Officers' Association. In addition to the Board and Public Service staff, there are a Senior Superintendent (Adult Education and External Studies); and 16 professional officers.

Hobart has three Adult Education Centres: at the Domain, South Hobart and North Hobart; as well as an inquiries and enrolment centre in the city centre. There are also centres and offices established in Launceston, Devonport, Burnie, Queenstown and in Rosny College, Hobart.

Operations

Courses: An extremely wide variety of courses, ranging in duration from one term to one year, is offered. A function of the Division is to initiate innovative programs and to respond to changes in community needs for adult education. Adult Education Officers are active in promoting community education and assist many voluntary organisations. The courses conducted in 1977 attracted 15 385 enrolments and involved 574 part-time tutors. Most activities are of a non-vocational nature and subject areas include liberal studies, arts, crafts, languages and basic education. A National Employment and Training (NEAT) Scheme secretarial course is run in Launceston and the Division, in co-operation with the Federal Department of Immigration and Ethnic Affairs, arranges courses in Hobart in advanced English for migrants and other courses for migrants throughout the State.

Schools, Seminars and Special Events: During 1977 the Division conducted 72 special events led by prominent local, interstate and overseas people; most of the weekend schools were held at 'The Grange'. Some of the most notable were 'Theories and Facts about Human Beings' with Wilfred Jarvis, 'Master Class in Singing' with James Christiansen and Marilyn Richardson and 'Jazz Workshop' with Don Burrows and George Golla. Summer schools conducted included two on historic buildings (Midlands and South), 'Art' with Michael Shannon, 'String Music' and 'South West Wilderness'. The 1977 Morris Memorial Lecture,

'China After Mao Tse Tung', was delivered by Dr. Stephen Fitzgerald. The division is also active in the community arts area and arranges, often in association with other bodies, art exhibitions, musical recitals and drama events.

Discussion Groups: Throughout the State almost 60 groups of 10 to 15 people meet once a month to study and discuss books of educational value and other material. This is a joint service given by the State Library of Tasmania and the Division of Adult Education. Discussion groups involve 700 suburban and isolated country people in 1977.

Residential College: 'The Grange' Residential College at Campbell Town, with accommodation for 30 students, has been leased from the National Trust since 1964. It is an old colonial country home built in 1848. It is one of only two adult education residential colleges in the country and is recognised by educationists as an institution of unusual worth.

The following table includes details relating to the number of staff and students and to expenditure in recent years:

Adult Education: Staff, Students and Expenditure

Particulars	1973	1974	1975	1976	1977
Centres served	75	82	87	87	91
Professional staff	11	14	14	14	14
Clerical staff	17	21	21	24	25
Part-time staff	355	481	477	494	574
Students (a)	12 084	13 490	14 240	16 740	15 385
Attendances (b)	4 036	4 897	5 052	3 796	5 496
Expenditure (c)	\$'000 373	558	688	786	1 081

(a) Total enrolled for term, semester or year.

(b) At special lectures, one day, weekend or summer schools and seminars.

(c) Excludes capital expenditure on new buildings, etc.

TERTIARY EDUCATION

Advanced Education in Tasmania

Concept

Education at tertiary level has been available at universities but there have also been professional courses provided by other institutions; in Tasmania technical colleges provided courses of this type in addition to playing their main role in providing apprentice training, trade courses, etc. The development of colleges of advanced education did not represent a radical innovation but rather a rationalisation and re-organisation of tertiary education courses.

In general terms, colleges of advanced education are providing tertiary education and training with a vocational emphasis, as distinct from the academic education provided by universities (though, of course, some university courses in Australia tend to be also vocational, e.g. legal and medical courses). In some states, advanced education is being developed on a base provided by existing institutions but in Tasmania and the A.C.T. separate colleges have been established.

History

Following a national seminar on planning for colleges of advanced education held in Hobart towards the end of 1967, the educational specifications and a master plan for the Mt Nelson Campus were prepared. In June 1969 the contract for the Resources Materials Centre (stage 1) of the project was let. Appointment of staff to the College commenced in 1971 and during 1972 the first on-site lectures were held at Mt Nelson. In 1973 a campus of the College was established at Newnham (a suburb of Launceston).

Advanced Education Council and College

The *Advanced Education Act* 1968 established the Council of Advanced Education. An amendment to this Act now provides for the appointment of 15 members of whom one shall

be the person holding the office of the Principal; two shall be officers of the Advanced Education Service (other than the Principal); and one shall be a person who is undertaking a course of advanced education.

The Tasmanian College of Advanced Education is organised into the Divisions of Business and Administrative Studies, Science and Technology, Teacher Education and Education Services, the Schools of Art, General Studies and Environmental Design, and the Conservatorium of Music.

A Committee on Post-Secondary Education, appointed jointly by the Federal and State Governments in April 1975, recommended major changes in the structure of the Tasmanian College of Advanced Education. The proposals were for widening the range of courses at the University, in Hobart, and establishing the Newnham college as the centre of advanced education in the north of the State. Implementation of this restructuring is now well advanced.

Students and Courses

The next table shows total enrolments for a three-year period:

College of Advanced Education: Enrolments
(number)

Description	1975			1976			1977		
	Males	Females	Persons	Males	Females	Persons	Males	Females	Persons
Full-time	732	1 016	1 748	768	1 056	1 824	747	1 089	1 836
Part-time	533	154	687	609	209	818	494	256	750
Total	1 265	1 170	2 435	1 377	1 265	2 642	1 241	1 345	2 586

Awards are made at four levels: bachelor degree, diploma, graduate diploma and master's degree. In the following table students in some courses have been shown at the bachelor degree level although a number of students will complete them at the diploma level.

College of Advanced Education: Enrolments by Course, 1977
(Number)

Course	Full-time		Part-time		Total	
	Males	Females	Males	Females	Males	Females
Degree courses—						
Accounting	45	10	132	18	177	28
Business administration	14	4	45	4	59	8
Engineering	53	1	50	—	103	1
Pharmacy	28	30	5	9	33	39
Public administration	2	—	17	—	19	—
Surveying	51	—	13	—	64	—
Applied chemistry (a)	7	1	25	4	32	5
Medical technology	18	14	18	22	36	36
Education	295	780	112	157	407	937
Music	45	50	3	3	48	53
Environmental design	59	13	—	—	59	13
Social work	17	36	—	3	17	39
Total	634	939	420	220	1 054	1 159
Diploma courses—						
Visual art	43	56	—	—	43	56
Visual art teaching	18	37	—	—	18	37
Art and craft	19	10	—	1	19	11
Old diploma courses (business administration, accounting, public administration) (b)	—	—	1	—	1	—
Valuation (R.M.I.T.)	6	—	3	—	9	—
Total	86	103	4	1	90	104

College of Advanced Education: Enrolments by Course, 1977—continued
(Number)

Course	Full-time		Part-time		Total	
	Males	Females	Males	Females	Males	Females
Associate diploma courses—						
Music	5	3	1	4	6	7
Art and craft	4	2	3	2	7	4
Total	9	5	4	6	13	11
Post-graduate diplomas—						
Librarianship	7	23	5	8	12	31
Legal practice	4	—	—	—	4	—
Special teacher education	2	14	—	—	2	14
Architecture	—	—	20	3	20	3
Landscape planning	—	—	3	1	3	1
Urban planning	—	—	12	1	12	1
Music	4	4	—	1	4	5
Total	17	41	40	14	57	55
Post-graduate degrees—						
Master of Education	1	1	26	15	27	16
Master of Pharmacy	—	—	—	—	—	—
Total	1	1	26	15	27	16
Total all courses	747	1 089	494	256	1 241	1 345

(a) Students in these courses have been shown at degree level, although many students will complete their course at diploma level.

(b) Courses are being phased out.

Teaching Staff

The next table shows teaching staff by full-time or part-time status:

College of Advanced Education: Teaching Staff (a)

Description	1972	1973	1974	1975	1976	1977
Full-time	115	167	184	203	205	201
Part-time	27	28	43	44	17	18
Total	142	195	227	247	222	219

(a) Teaching effort expressed as full-time equivalent units.

Finance

At the June 1973 Premiers' Conference the states accepted the Federal Government's offer to assume full financial responsibility for tertiary education from 1 January 1974. (The amounts of recurrent expenditure saved by the states were deducted from their financial assistance grants.) The Federal Government also announced in its 1973-74 Budget the decision to abolish tuition fees.

Prior to 1972-73 Federal Government grants for colleges of advanced education and for teachers' colleges were provided under separate programs, but since then they have both been absorbed into a wider program of grants for advanced education.

University of Tasmania

Founding

The University of Tasmania was founded in 1890 and was the fourth to be established in Australia. When teaching began in 1893 with three lecturers and six students it occupied 1.6 hectares of land on the Queen's Domain at Hobart.

Residential Colleges

There are five residential colleges in the University. Christ College, affiliated with the University in 1933, was moved to new premises on the University Campus at Sandy Bay in 1962 and provides accommodation in single study-bedrooms for 138 male and female students, eight tutors and a deputy warden. Hytten Hall was opened in 1959 with accommodation for 124 male students. Extensions have raised this figure to 180 students with about half accommodated in single study-bedrooms and the remainder in double rooms. Female students were admitted for the first time in mid-1978. St John Fisher College, opened in 1962, accommodates 86 male students in single study-bedrooms and is under the direction of the Catholic Church. Jane Franklin Hall was founded by the Tasmanian Council of Churches in 1950 as a hall of residence for women students. The Hall now provides accommodation for 150 male and female students. Ena Waite Women's College was founded in 1968 and accommodates 25 female students.

Buildings

The University site at Sandy Bay was chosen in 1944. Until 1957 temporary huts were used extensively, mainly by the rapidly growing science departments. In 1957 the first permanent building was erected and by 1973 all departments of the eight faculties were housed in permanent buildings.

Since that date the new buildings completed are: a computer centre; a child care centre; a cosmic ray observatory; a sports and recreation centre; and the University Centre which consists of a complex of lecture theatres (which can be combined to form a single 800-seat hall), a fine arts gallery and a classics museum. A major extension to the Arts-Commerce-Education building has been completed as well as a further extension to the Union building.

A pedestrian underpass (provided by the State Government), connecting the Union building with rest of the University campus, was completed in 1977. Building activity is now confined to minor additions.

Finance

From 1974 the Federal Government assumed full responsibility for tertiary education and in 1977 it provided \$16.2m towards the University's recurrent expenditure. Tuition fees were abolished as from 1974 and an assistance scheme was introduced to assist full-time students, subject to a means test.

The following table shows the income and expenditure of the University of Tasmania for a four-year period:

University Income and Expenditure (a)
(\$'000)

Particulars	1974	1975	1976	1977
INCOME				
Recurrent purposes—				
Federal Government	9 427	13 107	14 892	16 213
Other	413	494	318	677
Total	9 840	13 601	15 210	16 890
Equipment grants—				
Federal Government	265	702	475	513
State Government	—	—	1	16
Total	265	702	476	529
Other purposes—				
Halls of residence	160	191	209	216
Prizes, scholarships and benefactions	83	99	105	125
Research grants	464	470	546	492
Other	49	46	63	53
Total	756	806	923	886
Total income	10 861	15 109	16 609	18 305

University Income and Expenditure (a)—continued
(\$'000)

Particulars	1974	1975	1976	1977
EXPENDITURE				
Recurrent purposes—				
Academic activities (incl. research)	6 605	8 880	9 801	10 992
Academic services	1 018	1 377	1 543	1 773
Student and staff services	131	222	290	288
General university services	2 293	2 981	3 224	3 660
Other	16	74	113	24
Total	10 063	13 534	14 971	16 737
Equipment grants—				
Academic activities (incl. research)	204	168	79	247
Academic services	619	175	130	329
General university services	91	17	36	26
Total	914	360	245	602
Other purposes—				
Halls of residence	195	231	247	241
Prizes, scholarships and benefactions	41	49	272	94
Research grants	434	530	419	524
Other	—	—	23	1
Total	670	810	961	860
Total expenditure	11 647	14 704	16 177	18 199

(a) Excludes receipts for capital purposes and capital expenditure.

Government of the University

The governing body of the University is the Council, comprising the Chancellor, the Vice-Chancellor and nineteen members, seventeen of whom are elected or appointed and two, the Director-General of Education and the Deputy Chairman of the Professorial Board, are *ex officio*.

The Vice-Chancellor is the chief academic and executive officer. He presides over the Professorial Board which is the governing body on academic matters.

Staff and Students

The following table shows the number of teaching staff and students:

University Academic Staff (Full-time) and Students Enrolled at 30 April

Particulars	1971	1972	1973	1974	1975	1976	1977	1978
Academic staff—								
Professors	31	33	32	33	33	35	r 38	38
Other	189	215	219	238	247	255	r 260	270
Total academic staff	220	248	251	271	280	290	r 298	308
Individual students enrolled	3 444	3 371	3 263	3 414	3 399	3 539	3 525	3 517

The next table shows the courses in which students were enrolled:

University Enrolments, 1978

Course	Students enrolled			
	New enrolments 1978 (a)	Total enrolments at 30 April		
		Males	Females	Total
Master and Doctor degrees	68	203	49	252
Bachelor degrees—				
Agricultural Science	12	32	13	45
Arts	373	504	554	1 058
Commerce	84	150	21	171
Economics	40	96	17	113
Education	44	47	112	159
Special Education	6	1	10	11
Engineering	40	154	2	156
Surveying (b)	50	50	—	50
Law (c)	60	111	47	158
Medicine (d)	53	194	82	276
Pharmacy (b)	66	35	31	66
Science	170	372	159	531
Combined B.A./LL.B.	56	64	24	88
Combined B.Ec./LL.B.	12	27	1	28
Combined B.Com./LL.B.	17	14	3	17
Combined B.Sc./LL.B.	3	3	—	3
Total	1 086	1 854	1 076	2 930
Non-degree courses—				
Education	183	102	108	210
Other (e)	97	77	48	125
Total	280	179	156	335
Total all courses	1 434	2 236	1 281	3 517

(a) New enrolments refer to those students who either commenced studies for higher degrees or, being undergraduates, enrolled at the University of Tasmania for the first time in 1978, or transferred from one faculty to another.

(b) Bachelor of Surveying and Bachelor of Pharmacy introduced in 1978.

(c) From 1975, students must complete one year in another faculty before starting law.

(d) Students may enrol for an honours degree in Medical Science after completing at least three years of M.B., B.S. course.

(e) Of students classified as 'other' 14 students were enrolled for a master degree qualifying examination. The remainder were enrolled for university subjects but were not proceeding to either a degree or diploma.

Degrees Conferred

The following table shows degrees conferred:

University of Tasmania: Degrees Conferred (a) During Year Ended 30 June

Degree	1973	1974	1975	1976	1977	1978
HIGHER DEGREES						
Higher Doctor	Males 3	1	2	—	—	2
	Females —	—	—	—	—	—
Doctor of Philosophy	Males 11	14	7	13	7	14
	Females 2	1	4	2	1	4
Master	Males 8	11	8	9	12	10
	Females 1	2	1	1	2	5

University of Tasmania: Degrees Conferred (a) During Year Ended 30 June—continued

Degree		1973	1974	1975	1976	1977	1978
BACHELOR DEGREES (b)							
Agricultural Science	Males	9	13	10	8	7	7
	Females	4	5	5	1	3	1
Arts	Males	109	120	96	91	91	92
	Females	149	169	127	132	119	131
Commerce	Males	—	—	—	—	—	8
	Females	—	—	—	—	—	—
Economics	Males	60	67	58	55	53	33
	Females	7	5	18	5	10	6
Education	Males	—	—	—	—	—	4
	Females	—	—	—	—	—	8
Engineering	Males	36	34	27	38	22	29
	Females	—	1	—	1	—	—
Law	Males	34	29	17	29	23	24
	Females	5	7	4	7	6	8
Medical Science	Males	21	14	38	25	22	37
	Females	8	11	5	15	15	7
Medicine/Surgery	Males	16	12	15	19	13	33
	Females	5	10	5	7	9	5
Science	Males	83	101	96	98	92	104
	Females	29	35	38	35	35	33
Total bachelor degrees	Males	368	390	357	363	323	371
	Females	207	243	202	203	197	199
	Persons	575	633	559	566	520	570

(a) Excludes honorary degrees.

(b) Includes bachelor degrees with honours.

FEDERAL GOVERNMENT ACTIVITIES IN EDUCATION

Introduction

The Federal Constitution gives the Federal Government responsibility for providing educational services in the Australian territories while leaving state governments with responsibility for the provision of educational services within their state boundaries.

In recent years the Federal Government has provided the state governments with substantial financial assistance specifically for schools, universities, colleges of advanced education and technical colleges. In addition, the Federal Government has administered Australia-wide schemes of financial assistance for students for many years.

The Federal Government first became directly involved in education when it established an Office of Education in 1945 and a branch was opened in Hobart. However, education remained a state responsibility—the principal functions of the Federal Government's Hobart office were migrant education and administration of Federal Government university scholarships. In 1951 the Hobart office was closed and its functions were transferred to the Tasmanian Department of Education which acted as an agent for the Federal Government. With increased financial involvement in education the Hobart Office was re-opened in 1964. However, education was still primarily a State responsibility.

The portfolio of the Federal Minister for Education includes the Department of Education, the Tertiary Education Commission (assisted by the University Council, the Advanced Education Council and the Technical and Further Education Council), the Schools Commission, the Curriculum Development Centre, the Commonwealth Teaching Service, the Australian Capital Territory Schools Authority. The Office of Child Care, which advises the Government on support for child care and pre-school education programs, is located within the Department of Social Security.

Department of Education

The Department provides advice to the Federal Minister for Education on general educational policy measures and the development and investigation of educational policy proposals in new areas. It is involved in planning and evaluation of the effective use of resources in Australian education and co-ordinates programs of advisory commissions and committees.

The Department advises the Federal Government on policy for furthering educational research. It undertakes educational research projects and provides the secretariat for the Education Research and Development Committee. The Committee advises the Minister on priorities in educational research, recommends the award of research grants and assists in the training of research personnel.

The Department is responsible for international relations in education, for example for co-ordinating Australian participation in the educational activities of UNESCO and OECD. It administers schemes of assistance for Australian students and also exchange programs which enable Australians to study overseas and overseas students and educationists to visit Australia. The Department is also responsible for the production of language teaching materials, provides advice on Aboriginal education and provides administrative assistance for a number of advisory committees, including the Australian Council on Awards in Advanced Education.

Secretariat services are provided to a number of advisory bodies including the following:

Australian Council on Awards in Advanced Education: The Council was established in 1971 to promote consistency in the nomenclature used for awards in advanced education and in establishing consistency between the courses and their associated awards.

Education, Research and Development Committee: This Committee was established in 1970 to advise the Minister on priorities in educational research, to recommend the award of research grants and to propose measures for the training of research personnel. The first of the Committee's awards of Educational Research Scholarships and Educational Research Fellowships were made in 1975.

Adult Migrant Education Program

A range of services is available to help adult migrants to learn or improve their English and to inform themselves about life in Australia. These education services commenced in 1947. Since 1951 the Adult Migrant Education Program has been a joint effort by the Federal and State Governments. The Federal Department of Education retains overall responsibility for the program while administrative control of migrant teaching activities is, for the most part, in the hands of state authorities.

The program now includes continuation classes, radio and correspondence courses, full and part-time courses of an intensive nature, courses in industry that provide language instruction at the work site, the home tutor scheme using volunteer tutors on a one-to-one basis and a colour television series providing English language and other information for migrants. This television program is broadcast in Tasmania over TNT Channel 9 Launceston.

During the 1977-78 financial year the direct expenditure by the Federal Government on the program in Australia was \$12 420 233. Of this, \$100 280 was spent in Tasmania. During 1977-78, 17 continuation classes operated in Tasmania for 327 students. A further 70 students were enrolled in the correspondence course, 117 students attended full-time accelerated courses and 59 migrants, mainly women, received one-to-one instruction in their homes under the home tutor scheme during the year.

Federal Government Assistance for Tertiary and Secondary Students

The next table shows the number of students in Tasmania who received Federal Government assistance under the various schemes for recent years:

Number of Students in Tasmania Receiving Federal Government Assistance at 30 June

Scheme	1973	1974	1975	1976	1977
Tertiary education assistance	-	1 460	1 668	1 770	1 773
University	920	-	-	-	-
Advanced education	359	-	-	-	-
Technical	108	29	12	2	-
Secondary	274	2	-	-	-
Adult secondary	-	-	37	39	64
Senior secondary	739	1 341	670	2	-
Secondary allowances	-	164	200	260	298
Post-graduate	52	50	54	54	51
Aboriginal secondary	140	241	313	316	300
Aboriginal study	7	16	11	15	12
Isolated children	805	603	806	731	688
Other (a)	55	37	23	9	-
Total	3 459	3 943	3 794	3 198	3 186

(a) Includes National Service Vocational Training Scheme, Pre-School Teacher Trainees (from 1973) and Commonwealth Teaching Service Scholarship Scheme.

Brief descriptions of the various schemes are given below:

Tertiary Education Assistance Scheme: This scheme provides means-tested (non-competitive) allowances to full-time, unbonded students attending approved courses at tertiary institutions. Benefits in 1978 included an allowance, subject to a means test, of up to \$1 250 per annum for a dependent student living with his parents; up to \$2 075 per annum for a dependent student living away from home; and up to \$2 348 per annum for an independent student. Dependants' allowances of \$31.40 per week for a dependent spouse and \$7.50 per week for each dependent child were payable. Also provided are allowances to assist with student union and other incidental fees. The following incidentals allowances were payable in 1977: for students enrolled at universities, \$100; for students at colleges of advanced education, \$70; and for students at technical colleges, \$30.

Adult Secondary Education Assistance Scheme: Assistance is available under this scheme for adult students who have had a break from secondary studies and who have returned to undertake final year secondary or matriculation studies at secondary schools, technical colleges and other approved institutions. Benefits payable are the same as those provided under the Tertiary Education Assistance Scheme.

Secondary Allowances Scheme: Families with limited financial resources are assisted under this scheme to maintain their children at school for the final two years of secondary education. In 1977 an allowance of up to \$550 per annum was provided on a non-competitive basis subject to family income.

Post-graduate Awards: Awards are made annually to enable students to undertake post-graduate studies at an Australian university or college of advanced education. In Tasmania, in 1978, 15 new awards were made available. Selection is made on the basis of ranking by each institution and in the case of Course Awards, the final order of merit list is drawn up by a Central Selection Committee. The award, subject to annual renewal, may be held for a maximum of four years in the case of a doctorate degree candidate or two years in the case of a master's candidate. In 1978 award holders received a living allowance of \$4 200 per annum. Provision is also made for assistance with travel, establishment and thesis costs and married award holders receive a dependants allowance for a dependent spouse and children.

Aboriginal Grants Schemes: The Department of Education administers two schemes of assistance for students of Aboriginal descent, the Aboriginal Study Grants Scheme and the Aboriginal Secondary Grants Scheme. Aboriginal study grants assist Aboriginals to undertake training and study after leaving school and provide the full-time student with fees and a living allowance. In 1978 married students or students 18 and over received \$57.27 per week, while unmarried students under 18 received \$47.25 per week. Other special allowances were also payable. The Aboriginal Secondary Grants Scheme provides assistance to Aboriginal secondary school students to encourage them to obtain a secondary education.

The scheme provides a living allowance which, in 1978, was \$308 per annum for students in junior grades and \$440 for senior students. Allowances are also payable for the cost of board, textbooks, uniforms, fares, fees and other items.

Assistance for Isolated Children: This scheme provides financial assistance to enable children living in isolated areas to have improved educational opportunities. Benefits are available for pupils who must live away from home to attend school and those studying through state education department correspondence schools.

Commonwealth Teaching Service Scholarship Scheme: This scheme provides competitive awards to students undertaking full-time courses of teacher education with the intention of becoming teachers in the A.C.T. or the Northern Territory. Benefits are comparable with the maximum amounts payable under the Tertiary Education Assistance Scheme, and not subject to a means test.

Office of Child Care

The Office of Child Care within the Department of Social Security was established in June 1976 to administer programs of assistance which provide for the care and development of young children before they reach school age, and of older children outside school hours.

By supporting a variety of programs carried out both through state governments and by local governments and community groups, the Office of Child Care aims to help families provide adequately for the needs of their children.

The Office also aims to provide a comprehensive integrated approach to children's services which will include day-care centres, family day-care programs, play-groups, after school and holiday care programs, occasional care and emergency care. The emphasis is on providing services to help people join together to make the best use of existing facilities for children.

The Australian Schools Commission

The Schools Commission was created by the Federal Government as a statutory body under the *Schools Commission Act 1973*. The Commission was preceded by the Interim Committee for the Australian Schools Commission, chaired by Professor Peter Karmel. The Interim Committee reported to the Federal Government in May 1973 in a Report entitled 'Schools in Australia', the major recommendations of which were accepted by the Government. As a result of this Report, funding for Australian schools for 1974 and 1975 was made available by the Federal Parliament which enacted the *States Grants (Schools) Act 1973*. Other Federal Government funds continued to be available under the *States Grants (Schools) Act 1972*. Supplementary grants were made in subsequent amendments to both Acts. Over this period some \$760m was made available to Australian schools and school systems under both Acts through Federal Government programs administered by the Schools Commission.

In broad terms, the functions of the Commission are:

- (i) To report to the Federal Minister of Education, after consultation with interested parties, on the needs of primary and secondary schools and on the priorities that should be given to satisfying those needs.
- (ii) To inquire into and report on important aspects of primary and secondary schooling, with a view to improving the quality of education and the efficient use of resources.
- (iii) To carry out, in conjunction with various schools and school systems, studies aimed at finding solutions to educational problems.

State Planning and Finance Committee

The functions of the State Planning and Finance Committee are to:

- (i) Supervise the distribution to non-government schools of Federal Government grants within the State and in particular to recommend subsidy levels for non-systemic schools and report regularly to the Schools Commission on the application of the needs principle in the distribution of block subsidy grants for Catholic systemic schools.
- (ii) Establish priorities based on need and approve applications for building grants from non-government schools.

- (iii) Recommended non-government schools seeking to be declared as disadvantaged for the purposes of the Disadvantaged Schools Program.
- (iv) Advise the Commission on matters affecting the financing and development of non-government schools, and on other matters as referred by the Commission from time to time.

Members are appointed by the Federal Minister for Education with the aim of achieving broadly representative committees in each state competent to make decisions on priorities and levels of funding in individual schools.

The levels of assistance to which a school may be entitled are shown in the following table. (In the case of Catholic systemic schools a block subsidy grant at one of these levels is given to cover all schools in the system.)

Per Capita Grant Rates: Non-Government Schools, 1978
(\$)

Subsidy level	Amount per primary school student	Amount per secondary school student	Subsidy level	Amount per primary school student	Amount per secondary school student
1	119	182	4	202	322
2	152	238	5	237	379
3	169	266	6	278	434

State Innovations Committees

State and Territory Innovations Committees were appointed for the calendar year 1978 by the Minister, each having ten members. They were required to report and make recommendations to the Commission through the National Innovations Committee. They were to be responsible for monitoring and administering support functions at the state level for funded projects as directed by the Commission.

Programs and Funding for 1978

The Commission operated seven programs during 1978. The programs and Tasmania's share of the funds are summarised below:

General Recurrent Grants Program: Tasmania was allocated \$9.7 million to cover staffing and other operating costs during 1977.

Migrant and Multicultural Education: Since April 1970 the Federal Government has provided additional support to both government and non-government schools to assist the children of migrants to gain appropriate benefits from schooling. Until December 1975 this assistance, provided through a program known as the Child Migrant Education Program, was administered firstly by the Department of Immigration and later by the Federal Department of Education. The main aim was to enable migrant children to attain competence in the use of the English language. Since January 1976 responsibility for administration of the Program has been assumed by the Schools Commission, which has, in its annual reports, identified a broader range of needs in the area of migrant and multicultural education. In Tasmania, as in several other states, a Migrant Education Committee, with representatives from all school sectors, advises on policy and acts as a focal point for the interchange of ideas and information.

Disadvantaged Schools Program: Tasmania was allocated \$0.402 million to help schools declared as disadvantaged to provide additional help for children whose social circumstances make it difficult for them to learn. In addition there was an allocation of \$4.1m nationally for projects in disadvantaged country areas. Tasmania received \$0.232m to be used jointly in government and non-government schools.

Special Education Program: Tasmania was allocated \$0.395m towards the education of physically and mentally handicapped children.

Services and Development Program: For joint government and non-government schools programs for teacher development, the provision of support services in schools, teacher replacement and teacher managed education centres, Tasmania was allocated \$0.434m.

Special Projects (Innovations) Program: Nationally \$3.772m was allocated for the support of innovative educational projects both at school and system levels. This program was administered by the State Innovations Committees.

Capital Grants Program: Tasmania was allocated \$4.766m for general capital works and for the capital component of other programs.

The following table shows, in greater detail, the grants allocated for the 1978 programs:

Schools Commission: Funding Allocated for 1978 Programs
(\$'000)

Program	Total allocation for Australia	Allocation for Tasmania		
		Government schools	Non-Government schools	Total
GOVERNMENT AND NON-GOVERNMENT SCHOOL PROGRAMS				
Recurrent grants—				
General	362 809	5 452	4 257	9 709
Special assistance	544	—	—	—
Migrant and multicultural	25 571	338	14	352
Disadvantaged schools	19 352	349	53	402
Special education	13 911	395	—	395
Total	422 186	6 534	4 323	10 857
Capital grants	164 450	4 004	762	4 766
Total	586 635	10 537	5 085	15 622
JOINT GOVERNMENT-NON-GOVERNMENT SCHOOL PROGRAMS				
Recurrent grants	24 553	n.a.	n.a.	707
Total	24 553	n.a.	n.a.	707
ALL PROGRAMS				
Total	611 188	n.a.	n.a.	16 329

Tertiary Education

The Tertiary Education Commission

In April 1977 the *Tertiary Education Commission Act* was passed by Federal Parliament and established the Tertiary Education Commission. The Commission which commenced operation on 22 June 1977, replaced the three previously existing tertiary commissions—the Universities Commission, the Commission on Advanced Education and the Technical and Further Education Commission.

The role of the Tertiary Education Commission is to develop and recommend policies for Federal financial support to the states across the range of post-secondary institutions. Under its Act, the Commission is required to perform its functions with the object of promoting the balanced and co-ordinated development of the provision of tertiary education in Australia and the diversification of opportunities for tertiary education. The Commission is assisted in its work by three statutory councils: the Universities Council; the Advanced Education Council; and the Technical and Further Education (TAFE) Council.

Funding of Tertiary Education

Universities and Colleges of Advanced Education: Federal Government assistance to the states for the recurrent expenditure of universities dates from 1951-52. Grants were then made on a matching basis (one dollar for each \$1.85 of state expenditure). Assistance for capital purposes was provided on a dollar-for-dollar basis. Assistance to the states for colleges

of advanced education commenced in March 1965 when the Federal Government agreed, as an interim measure, to make capital grants totalling \$5 million during the remainder of the 1964-66 triennium. Grants for recurrent expenditure of colleges were made from the beginning of the 1967-69 triennium. The formula for matching both capital and recurrent grants for colleges with state expenditure was similar to that applied in the case of universities. As from 1 January 1974, the Federal Government assumed full financial responsibility for both universities and colleges of advanced education.

Technical and Further Education: The Federal Government first became involved in the provision of grants for technical and further education (TAFE) in 1964, when a scheme of unmatched capital grants to the States was introduced. These grants continued under the *States Grants (Technical Training) Acts* to 30 June 1974. The Federal Government, acting on the recommendations of the Australian Committee on Technical and Further Education (ACOTAFE), then introduced grants for TAFE recurrent expenditure while continuing its financial support for TAFE capital purposes. These grants have been provided under the *States Grants (Technical and Further Education) Act 1974*, the *States Grants (Technical and Further Education Assistance) Act, 1976* and the *States Grants (Tertiary Education Assistance) Act 1977*. Under this last Act, for calendar year 1978, Tasmania was allocated grants (at December 1977 prices) of \$772 000 for TAFE capital purposes and \$1 272 000 for TAFE recurrent purposes.

The following table sets out Federal Government payments to Tasmania for university education, advanced education and technical and further education for recent years:

Federal Government Payments to Tasmania for Tertiary Education
(\$'000)

Sector	1972-73	1973-74 (a)	1974-75	1975-76	1976-77	1977-78
University—						
Recurrent	2 530	6 415	12 274	13 659	(b) 16 427	18 057
Capital	842	694	1 279	2 589	573	456
Advanced Education—						
Recurrent	1 128	3 960	6 888	7 011	8 678	9 361
Capital	(c) 1 425	292	2 969	5 313	404	1 493
TAFE—						
Recurrent	—	r 117	r 426	r 1 087	r 969	1 110
Capital (d)	380	690	r 471	r 887	r 1 665	1 970

(a) From 1 January 1974 the Federal Government accepted full responsibility for financing universities and colleges of advanced education.

(b) As from 1 July 1976, equipment grants for universities have been included in recurrent grants.

(c) Includes \$250 000 paid under *States Grants (Teachers Colleges)* and *(Pre-School Teachers Colleges) Acts*.

(d) Includes grants for equipment.

STATE LIBRARY OF TASMANIA

General

The State Library of Tasmania was created in 1943 under the *Libraries Act 1943* from the former Tasmanian Public Library which was formed 1849. The purpose of the State Library is to provide a comprehensive library and information service to all sections of the Tasmanian community. The State Library offers co-operative services to special groups such as school libraries.

Organisation

Headquarters

The State Library headquarters is located in central Hobart. The following major functions are provided from the headquarters:

State Reference Library: Provides reference and information facilities for the general public and industry, and contains a bookstock of approximately 273 900 books, periodicals, pamphlets, maps, etc. Special sections of this department house unique collections of books, documents, etc, relating to Tasmania. Collections include: (i) the Tasmanian Collection—a definitive collection of books, published in Tasmania; (ii) the W. E. Crowther Library—a large research collection of books, pamphlets and other items relating to Tasmania and Australia; and (iii) the Allport Library and Museum of Fine Arts—comprising a collection of antique furniture, china, glass, silver, pictures, prints and rare books in fine editions.

Archives Office: Under the *Archives Act 1965*, the State Library is the official repository for all official State Government records. A considerable quantity of private records of individuals, companies, associations, societies and institutions is held in addition to official records.

Hobart Lending Library: Provides a book lending service for adults and children. Approximately 128 000 volumes are held in this collection.

Performing Arts Collection: The collection contains over 5 700 films, and approximately 94 500 records and cassette tapes. Films and records are available for borrowing by individuals and organisations.

Resources Division: Controls the selection and disposition of all materials throughout the State Library system.

Technical Services: Responsible for the acquisition, cataloguing and classification of all materials added to the State Library.

Regional Libraries

Service to the remainder of the State is provided through six regional library systems forming an integral part of the State Library Department.

The Channel Regional Library System serves 23 000 people centred on Kingston from a temporary central library.

The Derwent Regional Library System serves 66 000 people centred on Glenorchy. A new central building for the region will open in September 1978.

The Hellyer Regional Library System serves 61 000 people in the north-west and west coast from Burnie.

The Mersey Regional Library System serves 44 000 people in the central north coast from temporary premises in Devonport. A site for a new central library has been selected.

The Northern Regional Library System serves 110 000 people from Launceston.

The Tasman Regional Library System serves 52 000 people in eastern Tasmania from temporary premises at Bellerive. A site for a regional headquarters building is under investigation.

The following table shows the distribution of branch libraries, depots, book-mobiles and books held throughout these regions and in the State Headquarters:

Public Libraries: Tasmania, 30 June 1978

Regional system	Buildings			Book-mobiles	Books held ('000)
	Central Library	Branch Library	Depots(a)		
State Library Headquarters	1	—	—	3	418.4
Channel Region	—	6	—	—	47.2
Derwent Region	1	15	1	—	87.6
Hellyer Region	1	13	—	1	158.7
Mersey Region	1	4	1	—	58.4
Northern Region	1	22	8	3	233.0
Tasman Region	—	7	1	—	73.5
Total	5	67	11	7	1 076.8

(a) Comprises a small collection of materials not housed in a separate library building or room.

Expenditure

The following table shows the main expenditure items for the State Library Department for recent years:

Expenditure (\$'000)					
Particulars	1973-74	1974-75	1975-76	1976-77	1977-78
Salaries and pay-roll tax	957	1 703	2 105	2 599	3 067
Purchase of books, etc.	390	588	665	790	910
Other	273	471	1 067	725	893
Total expenditure	1 620	2 762	3 837	4 114	4 870

The Education Division

The Education Division is a newly-created division, established in February 1978 following Ministerial acceptance of the *Sale Report* by the Tasmanian Advisory Committee on Libraries (1977). It has been formed around the nucleus of the former Library Services Branch of the Education Department of Tasmania and is headed by the former Supervisor of Libraries, now Assistant State Librarian (Education Services).

The Division is responsible for: (i) developing effective library support services to schools and colleges and to adult education; (ii) consultancy and advisory services on library matters in all educational areas; and (iii) maintaining liaison with all appropriate branches of the Education Department.

School and College Library Services

Libraries under the control of professional teacher-librarians have been established in 118 schools and colleges of the Education Department and in several non-government schools. Advisory services are available to all of the approximately 300 schools and colleges in the State. The resource-buying budget in this area is well in excess of \$0.5m per annum.

The Division is engaged in the planning of new libraries, conduct on in-service education programs, professional advice to teachers and teacher-librarians, preparation of library funding programs, operation of central cataloguing services and provision of resource evaluation information.

TEND COMMITTEE REPORT**(Tasmanian Education Next Decade)**

In November 1976 the then Minister for Education (Mr. Batt) set up a Committee to examine Tasmanian education. The TEND Committee (Tasmanian Education Next Decade) was chaired by Professor Connell (Emeritus Professor of Education at Sydney University). Members came from the teaching and administrative arms of the Education Department, business and the non-government school sectors. Terms of reference for the Committee were wide ranging. The Minister hoped that the Committee would consider the following:

'The relationship between schools and the communities they serve.

The schools system's capacity to contribute towards equality of education, with particular reference to country, gifted and handicapped children or those with specific learning difficulties.

The teaching of values.

Studies in religion.

The need for general or specialist education at secondary level.

Literacy and numeracy.

The use of educational resources and skills.

The structure of the school system.

Administration of the education system.'

The Committee first met on 30 November 1976. Most of its 12 full meetings were held in Hobart. Members travelled to various parts of the State to run public meetings and to discuss issues that were emerging during its deliberations. Talks were held with a range of education and general community groups. In addition to meetings and discussions 213 written submissions were made by individuals and groups.

Basic Assumptions

The Committee's assessments of the existing state of Tasmanian education and recommendations for the future were guided by several basic assumptions:

Education is Concerned with Raising the Quality of all Human Experience: Traditionally schools have emphasised intellectual education and development of character. Both are vitally important. However, the teacher should also seek to raise the quality of all kinds of human experience in which students are involved. For example, teachers should be interested in improving students' physical performance developing their social and human relation skills, etc.

Education Should be Related to the Needs of the Community: Educators should be aware of the requirements of their local area and should provide services that meet these local needs. At the same time there has to be an awareness of wider issues and needs (e.g. at Tasmanian, Australian and international levels). Education must also be relevant to these. Basic community needs are the acquisition of literacy and numeracy, acceptance of a set of basic values and a knowledge of the practices and institutions of society. Additionally, education needs to be concerned with various matters that are necessary to develop and maintain community life. These may vary in time and place. Education is also concerned with raising the general quality of life throughout the community.

Education is a Life Long Pursuit: Formal education is concentrated in three phases—primary, secondary and tertiary (technical and advanced education colleges and universities). Generally these phases are completed early in life. Education for adults has not been generally pushed beyond secondary school. Many regard high school as completion of their education. The Committee believes emphasis should be placed upon developing adult education so that continuous education throughout life is a real possibility.

Education in the Next Decade Should be Developed through a Carefully Managed Program of Innovation and Consolidation: The community is usually reluctant to accept sudden or substantial educational changes. Change and new methods are, however, essential to the progress of education. Both teachers and public need to have a clear understanding of the changes and the reasons for them. To quote the Committee '... It would be unintelligently obstructive to reject innovations that are designed to improve and update educational practice. What is needed is neither rejection, nor acceptance, nor even compromise but judicious and sympathetic guidance, tolerant control and continuous evaluation.'

Priorities

In looking at the Tasmanian education system the Committee identified seven priority areas for attention when considering educational development over the next decade. These priorities, listed below, affect a wide range of educational policies:

- (i) Raise the quality of literacy and numeracy.
- (ii) Maximise educational opportunity, particularly for rural children.
- (iii) Strengthen school-community relationships.
- (iv) Improve education for the 16 to 20-year-olds.
- (v) Develop new approaches to the school curriculum, particularly core curriculum and school-based curriculum.
- (vi) Maintain and develop the quality of the teaching service.
- (vii) Achieve a sense of direction in education.

Curriculum

'We think that one of the most important things that should be done in the next decade is a thorough overhaul of the primary and secondary school curriculum.' Developments such as new subjects, teaching methods and changed educational objectives have made an overall review of curriculum procedures necessary. In the past curriculum changes and development have been piecemeal. It is time that methods were assessed and consolidated. The Committee identified five main problem areas for curriculum development. These were: (i) the level of school responsibility for curriculum development; (ii) nature and content of core curriculum; (iii) values education (moral, religious and aesthetic education); (iv) numeracy and literacy; and (v) examination and certification procedures.

School Based Curriculum

Over the past 10 years there has been a marked trend towards increased school responsibility for its curriculum. Advantages are: (i) each school can provide a curriculum best suited to its own students; and (ii) a challenge and stimulus is given to teachers. The main disadvantages are: (i) school programs may differ substantially and create extra difficulties for students moving to another school; and (ii) the community may have difficulty in comparing and assessing standards in different schools. To reduce the disadvantages four things are needed—guidelines, training, resources and evaluation.

Guidelines: Firm and comprehensive guidelines for curriculum construction need to be worked out. Guidelines should clearly state the essential objectives, range of possible contents and methods, limits to the school's freedom in constructing curriculum and the performance standards to be expected. Guidelines should cover the curriculum in general and each area of the curriculum. From kindergarten to year 12 the curriculum should be treated as a single entity—e.g. they would cover teaching mathematics from kindergarten through to year 12. Production of guidelines is the responsibility of the central authority. The Committee strongly recommended recruitment of teachers with post-graduate training in curriculum development and that provision should be made for interested teachers to gain post graduate qualifications in the area.

Training: For school based curricula to succeed teachers must be trained in curriculum construction. Few teachers have made a serious study of the subject. For most teachers in-service training will be necessary.

Access to Resources: Teacher access to material and human resources will be essential. Constant and informed support for school-based curriculum work will be necessary. The Committee recommended that work of the Curriculum Branch, In-service Branch and Media Centre be closely co-ordinated. A system of regular secondment of teachers to the Curriculum Branch should also be established. Regional curriculum officers, to act as consultants to the region's schools, would also help.

Evaluation: For school-based curricula to be effective an evaluation process must be built into the system. The evaluation should involve teachers, pupils and members of the community.

Core Curriculum and General Education

General education covers the subject content and processes that are desirable for all persons to try and learn. It is a selection from the knowledge available at any given time. To intelligently select the content for general education a careful analysis of the present culture is needed. This should be related to the society in which the school is placed. Currently analysis of this kind is insufficient. Over the next decade such analysis should produce substantial changes in education content.

Within general education there exists a central core of processes that affect all aspects of the general program. These key processes comprise the core curriculum. According to the Committee the three basic tasks of a school are that every child should learn to: (i) communicate effectively; (ii) think efficiently; and (iii) develop humane value standards.

Values Education

Community, moral and aesthetic values have become less clear cut in recent years. The range of acceptable behaviour has widened. The school's task is to contribute to the quality of

the community by developing students' self awareness and by raising the level of their social awareness and responsibility.

Literacy and Numeracy

The Committee received many submissions critical of literacy and numeracy levels. Tasmanian studies in 1975, 1976 and 1977 of 10 and 14-year-olds showed:

- (i) Thirty per cent of 10-year-olds in government schools have fundamental weaknesses in both reading and numeracy that are a considerable handicap to their educational progress.
- (ii) About 30 per cent of 14-year-olds in government schools have fundamental weaknesses in reading and about 40 per cent in numeracy.

Students in urban areas tend to perform noticeably better than those in rural areas and students in middle class areas better than those in lower class areas. The surveys clearly indicate a serious problem.

The concept of equality of education has changed. Once it was sufficient that the bright child of poor parents could work his way through education to the top. Now the demand is that all young people should have the opportunity to reach an educational level of substantial literacy and numeracy that would enable them to participate as skilled and responsible persons in the community.

It is unlikely that any single factor is responsible for the problem, although social and home environment are important factors. The Committee recommended the following:

- (i) A substantial and regular program of diagnostic testing in each of the literacy and numeracy areas to pin-point the particular deficiencies in students that need to be remedied.
- (ii) An annual monitoring program which would include State-wide proficiency testing conducted by the Research Branch at about four different age levels in the system (e.g. for 8, 11, 14 and 17-year-olds) to supply accurate information on the current state of literacy and numeracy, to assess progress and to evaluate methods used in dealing with the problem.
- (iii) The introduction, into teacher education courses for all teachers, of basic methods of dealing with language and numeracy competence and the extension of in-service education to provide information on new resources for teachers, guidance on standards that are required, and experience in appropriate techniques.
- (iv) A sufficiently generous provision of additional teachers and community helpers to enable teachers of literacy and numeracy subjects in primary and secondary schools to give more time to helping students individually, and to correcting and discussing their written work.
- (v) A program of community involvement which associates the community more closely with the school's activities, increases the amount of encouragement given by families to their children and improves the education facilities of the community in the language and mathematical areas.
- (vi) Additional remedial teachers will still be required to supplement classroom teachers even when they have a more generously arranged load; they are needed to deal with more difficult cases of disability requiring teachers with special training.
- (vii) No particular methods have been shown to be successful beyond all others, but existing evidence suggests that within whatever pattern of teaching is used there should be an emphasis: (a) in writing, on more extensive writing practice; (b) in reading, on encouraging students to read widely and constantly to consolidate their reading skills in the large amount of good and attractive literature now available for all age levels; (c) in numeracy, on practice in applying numeracy skills to a wide variety of problems; and (d) in general, on building up confidence and satisfaction in students, and a solid demand by the teacher at all times for student effort and for work that is well done.

Examination and Certification

The School Certificate is the final award for about three-quarters of the students who enter secondary schools. It is evidence of having completed a junior secondary education. Many employers look to the School Certificate for evidence of general education and proficiency in basic skills. They would get better information by asking for a wider-based and more substantial statement from the applicant's school. The Committee recommended that each school and college should issue pupils with a comprehensive certificate outlining school performance in all activities at whatever point the student leaves.

The Higher School Certificate is the final award in secondary education and has an important influence upon the final years of education. The syllabus for it is externally prescribed and the emphasis is on preparing students for the type of questions examiners set. The interest is centred on the test—not on the education leading up to it. It also makes nonsense of the move to school-based curricula. For proper development of education in Tasmania the Committee felt that:

- (i) Colleges should be responsible for devising their own courses.
- (ii) College courses should cover the final two years of a six-year secondary education. Students leaving at the end of the fifth year should be issued with an appropriate certificate, and after work experience considered for entry to university or advanced colleges.
- (iii) College teachers should be responsible for assessing students.

Organisation of Education

The current administrative structure is three-tiered. A central administration in Hobart for the whole State; three regional directorates (south, north and north-west); and thirdly the school for which each school principal and his staff are responsible. Regional organisation is a fairly recent development. Advantages of regionalisation are: administration is more responsive to and caters better for local needs; decisions are speeded up (fewer levels of the bureaucracy to get through); and it allows greater participation in management. The Committee believed that the responsibilities of regional management should be increased. Central office should be responsible for the following functions:

- (i) *Finance*: After advice from regional office, Central Office should be responsible for allocation of funds, payment of salaries, cost of capital works and purchase of properties.
- (ii) *Properties*: It should determine construction priorities, be responsible for calling tenders, acquiring school sites, etc.
- (iii) *Planning and policy making*: Central Office should, in consultation with regional offices, set general guidelines and determine policies.
- (iv) *Monitoring*: Watching standards and developments throughout the State should be carried out from Central Office.
- (v) *Personnel recruitment*.
- (vi) *Research and innovation*: Large scale investigation and research associated with general educational planning may be best carried out through a central office.
- (vii) *Relations with federal agencies*.

Regional offices should look after the following aspects:

- (i) *School staffing and teacher assessment*.
- (ii) *Pupil placement and guidance*.
- (iii) *Property maintenance*.
- (iv) *Curriculum*: The main responsibility for providing advice and assistance to schools should come from officers on regional staffs. They are in the best position to be in close contact with the schools and are sensitive to the needs of the region.
- (v) *In-service education, consultation and research*: Schools depend greatly upon the extent to which teachers can be assisted by in-service workshops, expert consultative services and the promotion of local small scale research and development projects.

- (vi) *Community relations*: Regional offices are responsible for promotion of better school-community relations. Development of community interest and participation in education rests largely with regional offices.

School Organisation

The student passes through a succession of stages—from infants (two years) to primary (four years) to junior secondary (four years) to senior secondary (two years). For many students the progress is too segmented. Teaching styles, testing procedures, location of classes, etc., all change abruptly in some schools. At the same time overlaps and unnecessary repetition of work occurs. In many other schools the transitions are smooth. In these schools an effort is put into joint planning by teachers on both sides of the transition point to build a continuous graded program throughout the school. The Committee recommended that all schools should take steps to promote continuity in the school system.

Streaming: The Committee found division of students according to ability in the latter years of high school to be widespread. Streaming was also practised in primary school and the early years of high school. The Committee said:

'There has been a considerable amount of research on streaming in schools and little firm evidence in its favour. There is nothing conclusive to support the common sense view that bright pupils, if put together in ability groups, are likely to improve their performance. There is, on the other hand, very good evidence to show that students who are consistently placed in lower ability groups actually tend to and are expected by their teachers to perform below expectation; they become confirmed dullards and do not realise their potential. There is a substantial amount of evidence that sorting on the basis of ability testing or school performance is nearly equivalent to sorting on the basis of social class differences and that teaching based on ability groupings tends to increase the advantage or disadvantage that social class status brings with it.'

The Committee recommended that streaming be discontinued.

Open Education: The following were identified as crucial elements in good open education: (i) existence of high motivation among students and teachers; (ii) warm atmosphere of caring by both teachers and students; (iii) cordial mutual support between teachers; and (iv) continuous and various means of assessment, efficiently administered and recorded. To achieve these qualities the Committee felt that the following were necessary:

- (i) Teachers should operate with reasonably small numbers and preferably in two or three teacher units.
- (ii) Teachers need adequate pre-service training in open education methods and support from in-service courses, administrators and teachers' aides.
- (iii) Teachers who work together must share and plan together.
- (iv) There must be carefully thought out objectives put into practice in a flexible but well planned structure.
- (v) There must be a large variety of material and comprehensive and challenging assignments for the students.
- (vi) All students' activities, performance in assignments, attitudes and general development should be carefully and systematically recorded.
- (vii) Effective communication with parents and the general community is necessary so that the school program will be understood and they will help achieve its objectives.

Size of schools: After considering the evidence the Committee decided a case had been made out in favour of small schools. A halt should be called to building large schools. They felt that a school of 500 was the point at which a school began to lose its effectiveness. Schools of 400 would be most productive in terms of teacher and student satisfaction, community involvement and effective deployment of educational services. The Committee recommended that schools should be planned to accommodate 300 to 500 students and in no case be allowed to exceed 750.

Pre-school and Primary School

The Committee believed that pre-school should be an integral part of the basic education offered to all children. The Committee strongly supported the increasing tendency to closely link pre-school/kindergarten years with the first years of infant primary school. In relation to pre-school the Committee stated: (i) the Education Department should put more effort into certification and assessment and also the provision of personnel; (ii) a review team should look at pre-school education and prepare guidelines for its co-ordination and development.

In relation to primary schools the Committee strongly supported the integration of school library services with those of the State Library. This would improve the library facilities available to primary school children. Continued emphasis should be placed on improving numeracy and literacy. A need for additional support services exists. These are in the areas of guidance, art, music and physical education. The need is greatest in country areas.

District Schools

District schools cater for classes from kindergarten to year 10. Their status in the education system and treatment was a disappointment to the Committee. '... Their past history is unpromising. They have been discouraged and emasculated by a declining rural population, by the supposed academic superiority of the high schools, and by an undiscerning public.' The Committee endorsed the recommendations made in the Departmental Committee report *'The Future of District High Schools in Tasmania'*. Recommendations were:

- (i) All students in years 7 to 10 should be educated at their local secondary school; bussing to nearby high schools should cease.
- (ii) In all secondary classes there should be a range of experiences in six basic areas and better facilities for further enrichment of the curriculum. Staffing to teach the common secondary curriculum would be easier.
- (iii) Positive discrimination should be made in favour of country children. There should be more generous staffing and creation of more promotion positions.

The Committee felt that careful consideration should be given to: (i) provision of specialist teachers (e.g. music, physical education, rural science); (ii) provision of increased support staff (e.g. speech therapists); (iii) making available more resources for student travel and visits by educational and art groups; (iv) upgrading physical facilities (science laboratories, libraries); (v) increased funding so that they are on a comparable level with high schools. The Committee believes that district schools need to be recognised as an institution in their own right.

High Schools

'... The school is concerned with raising the quality of all human experience, and therefore with health, social relationships and moral and aesthetic development as well as with intellectual cultivation.' The Committee believed that there was no preferred order among these objectives and that all were inter-related. At present, in high schools, there was a clear emphasis upon intellectual development. This emphasis, in the Committee's opinion, was proper but should not be an exclusive one.

The Committee found a tendency in many Tasmanian communities to think of year four at high school (grade 10) as completing secondary education. This encourages many students to leave at this stage or, all too often, one year earlier. This attitude is reflected in retention rates. Tasmania has the highest age for compulsory school attendance (16 years) but the lowest retention rate for grade 12 of any Australian state. (In Tasmania 83 per cent of children leaving primary school are still at school in grade 10 and only 26 per cent in grade 12. For other Australian states the retention rate for grade 12 exceeds 34 per cent).

In fact, year four at high school (grade 10) is only the completion of the junior part of secondary education. The holding power of high schools needs to be improved. To do this the Committee recommended:

- (i) Continuity in secondary education should be promoted by planning a co-ordinated six-year curriculum and by addition of grade 11 and 12 classes to some district and high schools where attendances at a community college is difficult.

- (ii) Convince parents and students of the desirability of a full six-year secondary education. This is a particular task for teachers and principals.

Nomenclature applied to schools was not of great importance. What is important is keeping the idea of comprehensiveness in secondary education. The Committee saw a comprehensive school as one:

- '(a) which may be attended by students of all levels of ability,
- (b) which offers courses suitable to a wide range of ability and interest, and
- (c) which enables students to choose a suitable education from the range of offerings without restrictive combinations.'

This pattern of comprehensiveness should be retained and strengthened. The Committee went on to say: '... Early dropout, undue streaming and inadequate provision for or encouragement of non-traditional subjects are factors that work against comprehensiveness in Tasmanian high schools. In rural areas, the principal handicap to comprehensiveness has been the tendency to send the academically more able students away from district schools to country high schools. This has made it difficult in many district schools to obtain a reasonable balance of abilities and courses and has, correspondingly, unbalanced the high school population. Until the movement from district schools is overcome and early dropout is arrested comprehensive education for all in Tasmania's rural areas will be seriously handicapped.'

In recent years government schools have developed greater individuality. There have also been experiments in junior secondary education. The Committee thoroughly endorsed these features. An implication of the growth of variety is a choice in schools and that parents and students should be allowed to exercise this choice. In the case of choice between a district and high school the Committee felt that public transport should not be provided to take children away from the district school.

Independent Schools

The Committee did not deal in detail with independent schools. It felt that many of its observations on state schools were equally relevant to independent (non-government) schools. The Committee was told that a principal advantage of non-government schools was that they gave children a choice. The growth of variety in state schools nullified this argument to some extent. However, new non-government schools continue to apply for registration and support. The Committee felt that founders of new schools should be able to demonstrate: (i) the school is viable—i.e. has sufficient staff, students and financial backing to survive; (ii) it has suitable premises and with a Commonwealth Government building grant it will be able to make the premises as satisfactory as the average government school; (iii) it has an approach to education that can be explained to and approved by a committee of educators; (iv) it has a staff of qualified teachers; and (v) it provides a service needed by the community.

Special Education

In recent years there has been much greater awareness of the many children who suffer from physical, psychological and environmental handicaps. At the same time there has been an increase in the knowledge of how to deal with these disabilities. There is still much to be done. It was recommended that attention be given to the following main needs:

- (i) A much greater emphasis is needed on early detection, diagnosis and treatment of disabilities.
- (ii) Develop the ability of classroom teachers to recognise disabilities and to take remedial action.
- (iii) Greater efforts are required to train and produce teachers, guidance officers and other support staff in special education. The present recruitment of such staff (remedial teachers, speech pathologists, guidance officers, welfare officers) is below the desirable level.
- (iv) Staffing and career prospects of persons working in special education need to be reviewed.
- (v) Provision in existing and new schools of areas where the auxiliary services can work.
- (vi) Further and more extensive provision of vocational education for handicapped students plus greater opportunity for them through community colleges.

Education of Girls

The Committee received a number of submissions which suggested that girls were educationally disadvantaged. They tend to develop lower levels of achievement expectations than boys; they receive less encouragement to participate in sports; and they tend to get channelled into subjects and subsequently occupations that are thought of as women's work. The Committee felt that action should be taken to give girls the same opportunity and awareness as boys.

Education Act

The Committee described the *Education Act* 1932 as '... a messy and unnecessarily detailed collection of amendments fluttering around the skeleton of the original Act.' The Act requires consolidation and simplification. It should be short and consist of simple statements enabling appropriate appointments to be made, instructions established, and measures to be taken for the conduct of education. Minor detail, such as staff titles, powers and procedures of boards, etc. should not be part of the Act. They only clutter the legislation.

School and Local Community

The amount of community-school contact varies from almost nil to well developed interactions. In recent years interest in developing school-community relations has increased. This has occurred on the part of both sides—the teachers and the community. Community participation needs to be encouraged. It benefits student performance and teachers and aids community education. Student performance is affected by parents' attitude to education. Support and interest at home helps push up achievement levels.

Community involvement helps teachers to assess what is needed and expected of the education system. It enables a more relevant curriculum to be developed. Close school-community relationships enable changes in education methods to be explained to parents and controversial issues to be discussed.

Education for the 16—20-Year-Olds

Compared with other Australian states proportionally fewer Tasmanians continue their education beyond the minimum prescribed by law. Based on available evidence the level of qualifications of members of the Tasmania labour force is lower than the national level. After reaching 16 years there is a high drop-out rate from education. The Committee felt a number of factors contributed to this:

- (i) Many parents saw no value in education beyond the compulsory limits. For students who do go beyond grade 10 their objective is often matriculation and this, in many cases, is not appropriate. Students need to look at the range of studies available and select appropriate courses.
- (ii) In rural areas the lack of further educational facilities cut persons off from the chance to continue their education.
- (iii) Many students believe that much of secondary education is irrelevant.

Low performance at high school discourages many from continuing their education after leaving high school and causes a fairly high drop-out from apprenticeships.

The Committee felt that students studying vocational and general education should be brought together within the one institution. This would make it easier for students to choose appropriate courses and to modify their field of study. Staff with a wider range of interests would be available, leading to the design of broader vocational courses and a better general educational. Also, the academically oriented student can get involved with vocational type studies. The student mixture would be better, being more balanced and representing a wider cross section of the community. Finally it would mean more efficient teacher and equipment utilizations.

To achieve better educational opportunities and retention rates the Committee recommended the development of better schooling facilities in rural areas. It also felt that the divorce of vocational and general education was unsound. Vocational, general and adult education should be combined and offered in community colleges.

Teachers and Teacher Education

Currently, teacher education is offered by the Tasmanian College of Advanced Education and through the Tasmanian University's Faculty of Education. The Committee favoured the development of closer relations between the two bodies and saw advantages in amalgamating the two teacher education programs. Amalgamation would benefit teacher education through an interchange of academic staff and reduce administrative overloads. Teacher education needs to be strengthened in the following areas:

- (i) *Curriculum construction*: With the development of school-based curricula teacher training in this work aspect is particularly important.
- (ii) *Core processes*: The Committee stated that the processes of communicating, thinking and valuing are central to the curriculum and are part of the activities of all teachers. Therefore all teachers (primary and secondary) should be competent to develop students' abilities in these areas.
- (iii) *Rural education*: An extensive effort is needed to upgrade rural education. Teachers need to be encouraged to take an interest in the problems and challenges of country education. Teachers should have a sound introduction to aspects of country education during their training.
- (iv) *Community involvement*: Pre-service education must introduce teachers to the ideas and techniques involved in developing and maintaining good school-community relationships.

The Committee noted several important deficiencies. University honour students go straight into the school teaching situation without previous teacher training. An additional year of studentship should be granted to allow honour students to receive teacher training. For technical college teachers the teacher education program is inadequate. A more satisfactory program needs to be established. Similarly, teacher-counsellors and guidance staff receive inadequate training.

Education in Rural Tasmania

It is necessary to provide rural dwellers with the same educational opportunities as exist for people in the towns and cities. Education offered need not be the same but if different it must be seen to be equal in quality to that offered to the urban population. The Committee believed that the disadvantages suffered by the rural community varied from area to area and that no single set of remedies would cover the whole of rural education.

Staffing: A major problem for country schools is staffing and the associated high staff turnover. In some schools more than half the staff leave for other schools at the end of the school year. Lack of promotional opportunities and life style are the main reasons for moving. Shortness of stay makes it difficult for teachers to become familiar with the school and its community. Nor are they able to become properly involved in the community. In addition many teachers receive their first posting to country schools. They are not used to handling composite classes. The different environment plus the demands of a new job put an undue burden on the new, inexperienced teacher. Staff turnover and the high proportion of inexperienced teachers reduced community confidence in schools. Another problem for country school teachers is the lack of support services. Speech pathologists, guidance officers, music and physical education teachers are frequently not available. This, combined with poorer access to in-service training, can make country teaching a difficult and frustrating task.

Education Facilities and Services: As well as the lack of teacher support services, many country schools lack adequate physical facilities. Gymnasiums, school buildings, equipment and teachers accommodation is often not up to standard.

Students' Education Program: Many country schools lack pre-school and kindergarten facilities. This means that an important element in the educational development is missed by many country children. When children reach secondary level the study options are often limited and chances of technical education restricted. Enrichment of the school program through guest speakers, theatrical groups, exhibitions, etc. is often difficult.

Students' Living Conditions: In country areas students often live considerable distances from the school to which they travel by bus. Consequently they are unable to remain after school for recreational and other activities and are often unable to participate in weekend

sport. Frequently country children put in time on farm work and their available study time outside school hours is reduced. A further complicating factor is that their parents often have limited educational expectations for their children. They do not encourage their children to maximise available educational opportunities.

A consequence of these disabilities is that country children do not reach their full potential at school. The children end up with low educational and vocational aspirations. Tests indicate that literacy and numeracy skills are markedly lower than for children in city and town schools.

To overcome the educational disadvantages faced by country children a program of positive discrimination favouring country schools must be undertaken. The main areas for action are:

Improvement of Staffing of Rural Schools: Teachers need to be offered greater inducement to stay longer at rural schools. Factors to achieve this include higher allowances; more credit for country service; and creation of better promotional opportunities within rural schools. It is important that promotional prospects for country school teachers be equal to those available in town. Positive steps need to be taken to give greater permanency to staff. A reasonable stay at a school is necessary so that teachers can build-up and maintain school-community involvement.

Teacher Education: Since most teachers will spend some time in country schools they should receive pre-service training to prepare them for the experience. In-service training must also be made available to country teachers.

Enrichment of School Curriculum and Facilities: 'A school that is interesting and stimulating attracts good teachers, arouses the community and satisfies its community.' School staff need to make the school program relevant to the student and local community needs. Teachers need to develop an active interest in the local district. Use should be made of the locality and its materials in teaching the children. More opportunity to get visiting groups to country schools should be sought. Selected country schools should be extended to include years 11 and 12. The curriculum of such schools must cater for both vocational and academic study. Support staff and remedial teachers must be built up for country schools so that the present literacy and numeracy disadvantages can be eliminated. Along with these factors school libraries in rural schools must be built up. Generally the country school libraries are sub-standard and need up-grading.

Development of Zonal Services: Currently Tasmania is divided into three educational regions—southern, centred in Hobart, northern in Launceston and north-west in Burnie. The Committee suggested that each region be split into zones. Within each zone appropriate schools would be designated as activity centres. Activities could include: encouragement of co-operation and exchange of staff between zone schools; promotion of local zone studies and development of materials for them; provision of remedial and other specialist teachers, speech pathologists and guidance officers to work throughout the zone; development of a teacher resource centre; acting as a centre for continuing education; and development of community participation.

Enrichment of Community Life: The Committee felt that the school must take an active role in stimulating community interest in education. Rural schools need to encourage community participation in school activities and to promote adult education for as wide a segment of the community as possible.

Task of the Rural School: The Committee saw the rural school's job as threefold. Firstly it needs to establish a foundation of sound knowledge for all of its students in the basic areas of learning. Secondly the school should provide opportunities for students to extend their interest and competence into other areas that will raise the level of their intellectual, social and physical skills. Country schools must prepare children for life in the country and life elsewhere, since many students will move out from their rural environment. Country children need to be given the same opportunities as their urban counterparts. Finally, as well as enriching the life of its students the school should attempt to do the same for its community. The school must activate the community's interest in education and the need for better education.

Development and Innovation

If the education system is to meet community requirements it must be ready to accept change, try out new ideas, monitor its own performance and to seek out ways of improving educational activities. The Committee believed that Government education in Tasmania had a fairly good record of innovation and development.

The Committee saw a need for balance between new ideas and maintenance of existing procedures. The education system should keep up with the best of contemporary developments. This in itself helps stimulate teaching in the schools. To help achieve this the Committee recommended establishment of a Director-General's committee on development and innovation. Such a committee should have its own budget and, working through the Director-General, it should have executive powers. Functions would include: looking at further development in all aspects of Tasmanian education; selection of significant tasks for investigation and experimentation; the encouragement and support of teacher initiative and experimentation; evaluation of new developments; dissemination of information about new ideas and practices; and undertaking whatever developmental tasks seem to be desirable and manageable. For most activities the committee should use established agencies within the Education Department.

Further References

ABS Publication Produced by the Tasmanian Office

Education, Tasmania (4201-6) (annual, 1976 issue released 8-12-77, 29 pp.)

ABS Publications Produced by the Canberra Office

School Enrolments (Preliminary) (4201-0) (annual, 1977 issue released 24-11-77, 4pp)

Schools (4202-0) (annual, 1977 released 9-6-78, 30pp)

Colleges of Advanced Education (Preliminary) (4205-0) (annual, 1977 released 2-11-77, 4pp)

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University Statistics, Australia (Preliminary) (4207-0) (annual, 1978 issue released 25-9-78, 7pp)

University Statistics, Part I: Students (4208-0) (annual, 1977 released 22-2-78, 41pp)

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Expenditure on Education, Australia (5510-0) (annual, 1976-77 released 11-10-78, 18pp)

Other Publications

Annual Reports of the Education Department, Tasmania (Government Printer, Hobart)

TEND (Tasmanian Education Next Decade) Report (Government Printer, Hobart, 1978)

Chapter 15

SOCIAL WELFARE AND HEALTH SERVICES

WELFARE

Introduction

In Australia, the principal social welfare benefits are provided by the Federal Government under the *Social Services Act 1947*, as amended, which is administered by the Federal Department of Social Security. Finance for the benefits is provided from the National Welfare Fund which is augmented each year from the Consolidated Revenue Fund by an amount equal to the payments made.

State social welfare, which covers child welfare and relief, is administered by the State Department of Social Welfare.

Federal Department of Social Security

The following table shows expenditure in Tasmania from the National Welfare Fund on benefits under the Federal *Social Services Act*:

Social Security Payments Under the Social Services Act
(\$'000)

Benefit or service	1972-73	1973-74	1974-75	1975-76	1976-77	1977-78
Age and invalid pensions	33 656	35 804	60 118	77 976	91 788	107 203
Widows' pensions	5 136	6 582	8 521	11 221	12 445	14 660
Supporting parent's benefit	—	—	—	4 742	5 578	6 404
Maternity allowances	241	230	229	215	215	213
Family allowances	(a) 8 185	7 212	6 610	7 766	(b) 31 197	30 968
Unemployment benefits	2 095	3 125	7 746	15 256	17 963	23 398
Sickness benefits	792	1 247	1 692	2 409	2 380	2 385
Special benefits	128	224	421	811	979	804
Rehabilitation services	152	176	369	440	525	461
Funeral benefits	44	44	44	41	43	43
Double orphans' pension	—	17	43	43	(c) 66	52
Handicapped child's allowance	—	—	45	197	(c) 345	385
Total	50 428	54 661	85 838	121 117	163 524	186 976

(a) In 1972-73 five 12-weekly payments, instead of the usual four, were paid.

(b) Family allowances replaced child endowment from July 1976. Abolition of income tax rebates in respect of dependent children accompanied this change.

(c) Estimated.

Federal activity in social services began with the passage of the Federal *Invalid and Old Age Pensions Act 1909*. This and the *Maternity Allowances Act* were administered by the Department of the Treasury until 1941 when the Department of Social Services commenced to function as a separate organisation. Later, the functions of the Department were widened with the passing of the *Child Endowment Act*, the *Widows' Pensions Act* and the *Unemployment and Sickness Benefits Act*. A referendum held in 1946 empowered the Federal Government to legislate for the provision of certain social services formerly provided by the states. In 1947, a consolidated *Social Services Act* was passed. Other major Acts administered by the Department include the *Aged or Disabled Persons Homes Act 1954*, the *Handicapped Persons Assistance Act 1974*, and the *Homeless Persons Assistance Act 1974*.

Pensions and Benefits

Social Security benefit rates announced at recent budgets are set out in the next table:

Social Security Benefits, 1976-77 and 1977-78: Maximum Rates
(\$ Per Week Unless Noted as Lump Sum Payments)

Benefit	1976-77		1977-78	
	August budget	Amending legislation (April)	August budget	Amending legislation (May)
Age and invalid pensions and sheltered employment allowances—				
Single person (a).....	43.50	47.10	49.30	51.45
Married couple (both eligible and living together), each	36.25	39.25	41.10	42.90
Married couple (both eligible but living apart through ill health or one eligible), each (a)	43.50	47.10	49.30	51.45
Wife (if not a pensioner)	36.25	39.25	41.10	42.90
First and each subsequent child under 16 years (b)	7.50	7.50	7.50	7.50
Guardians' allowances—				
Where there is a child under 6 years or an invalid child requiring full-time care	6.00	6.00	6.00	6.00
Other cases	4.00	4.00	4.00	4.00
Maternity allowances (c)—				
No other children	30.00	30.00	30.00	30.00
One or two other children	32.00	32.00	32.00	32.00
Three or more other children	35.00	35.00	10.00	35.00
Multiple births, additional payment for each additional child	10.00	10.00		10.00
Family allowances (child endowment to June 1976) (d)—				
One child	3.50	3.50	3.50	3.50
Two children	8.50	8.50	8.50	8.50
Three children	14.50	14.50	14.50	14.50
Four children	20.50	20.50	20.50	20.50
More than four children	(e)	(e)	(e)	(e)
Orphan's pension	11.00	11.00	11.00	11.00
Handicapped child's allowance	15.00	15.00	15.00	15.00
Supporting parent's benefit	43.50	47.10	49.30	51.45
Widows' pensions (a)—				
Class A, widows with dependent children—				
Where there is a child under 6 years or an invalid child requiring full-time care	6.00	6.00	6.00	6.00
Other cases	4.00	4.00	4.00	4.00
First and each subsequent child under 16 years (b)	7.50	7.50	7.50	7.50
Class B, widows aged 50 years or more (f)	43.50	47.10	49.30	51.45
Class C, widows under 50 years of age in necessitous circumstances	43.50	47.10	49.30	51.45
Funeral benefit (g)	40.00	40.00	40.00	40.00
Unemployment and sickness benefits (h)—				
Single person	43.50	47.10	49.30	51.45
Married couple	72.50	78.50	82.20	85.80
First and each subsequent child under 16 years	7.50	7.50	7.50	7.50
Rehabilitation service	(i)	(i)	(i)	(i)
Personal care subsidy (j)	15.00	15.00	15.00	15.00

(a) Supplementary assistance at a maximum rate of \$5.00 a week is payable in certain circumstances.

(b) Or a person who is a full-time student and dependent on the pensioner.

(c) Single, lump sum payment; abolished in August 1978 Budget for births occurring after 31 October 1978.

(d) Child under 16 years or student under 25 years. Applied from July 1976.

(e) \$20.50 plus \$7.00 per week for each other child or student.

(f) Class B Widows' pensions may also be payable to certain widows between 45 and 50 years of age.

(g) Single, lump sum payment.

(h) A supplementary allowance at a maximum rate of \$5 a week is payable subject to the payment of rent and to an income test.

(i) During periods of rehabilitation treatment, disabled patients receive the appropriate pension or benefit and while receiving vocational training they are paid a rehabilitation allowance. In addition a training allowance and, where appropriate, a living away from home allowance are also payable free of income test. Free vocational training, with associated allowances, may also be available to Class A and Class B widow pensioners.

(j) Payable in respect of persons who receive approved personal care in an aged persons' home conducted by an eligible organisation under the *Aged or Disabled Persons Homes Act 1954*.

In the previous table a description was given of the various Social Security pensions, benefits, etc. The rates and conditions are varied from time to time by amending legislation; the 1977-78 rates were announced in the Federal Budget of August 1977 and were further increased by legislation in May 1978. (The Federal Treasurer outlines social security proposals in his budget and these are implemented in later Acts.)

Income Test

In November 1976, the income and property means test for persons under 70 years of age was abolished and replaced by an income test only. The capital value of assets is no longer taken into account when assessing entitlement to pensions. The same income test applies with respect to all pensions and the supporting mother's benefit. Blind persons, however, may receive the maximum rate of pension free of the income test.

Age and Invalid Pensions

Generally pensions are payable to persons who have been resident in Australia, New Zealand or the United Kingdom for 10 years in the case of age pensioners and five years in the case of invalid pensioners. (Reciprocal agreements exist with New Zealand and the United Kingdom.)

The qualifying ages for aged pensions are 65 years for men and 60 years for women; invalid pensions are payable to persons over 16 years of age who are permanently incapacitated for work. Additional allowances are payable for dependants under certain conditions.

Amending legislation in October 1978 varied the sliding scale income test so that a single pensioner can draw the full pension (\$2 675.40 per annum) and also have other income not exceeding \$1 040. When the single pensioner's other income reaches \$6 390.80, all pension ceases.

Married pensioners can draw full pension (\$4 461.60 per annum) and also have other income of \$1 794. When their other income reaches \$10 717.20, all pension ceases.

The 1973 Budget abolished the means test for all people aged 75 years or more and an amending Act passed in April 1975 abolished the means test for all persons aged 70 years or more. From August 1978, the income test has been re-introduced for all pensions except in cases of persons who are permanently blind. However, the income test was not to apply to persons aged over 70 in respect of the level of pension received in August 1978 but pension increases for such persons are subject to the income test.

Subsidised medical service and medicine are provided for pensioners and their dependants and a concessional telephone rental equal to one-third of the amount otherwise payable is available to blind people, pensioners who live alone, and to certain others. On the death of one of a married pensioner couple, the survivor receives six fortnightly instalments at the married couple rate before reduction to the single rate.

Widows' Pensions

These were first introduced in 1942. They are payable to widows who have been resident in this country, New Zealand or the United Kingdom, for five years before claiming a pension. There is no residential qualification where the woman and her husband were living permanently in Australia before he died. A woman also qualifies if her husband died overseas and she has lived in Australia for 10 years at any time.

The following table shows, for Tasmania, the number of persons receiving age, invalid and widows' pensions, and supporting parents' benefits; and the amounts paid out in pensions and allowances:

Age, Invalid and Widow Pensioners and Supporting Parents' Benefits, Tasmania

Particulars	1972-73	1973-74	1974-75	1975-76	1976-77	1977-78
Age and invalid pensions—						
Number of age pensioners (a)—						
Males	9 270	10 304	11 225	11 700	12 114	12 855
Females	19 837	21 600	23 044	23 894	24 840	25 482
Persons	29 107	31 904	34 269	35 594	36 954	38 337

Age, Invalid and Widow Pensioners and Supporting Parents' Benefits, Tasmania—continued

Particulars	1972-73	1973-74	1974-75	1975-76	1976-77	1977-78
Number of invalid pensioners (a)—						
Males	2 836	3 028	3 341	3 918	4 401	4 343
Females	2 019	2 059	2 119	2 173	2 211	2 120
Persons	4 855	5 087	5 460	6 091	6 612	6 463
Amount of pensions paid	\$'000 33 656	35 804	60 118	77 976	91 788	107 203
Widows' pensions—						
Number (a)	3 600	3 932	4 103	4 209	4 337	4 465
Amount paid	\$'000 5 136	6 582	8 521	11 221	12 455	14 660
Supporting parent's benefit—						
Number (a)	—	936	1 289	1 699	1 778	1 984
Amount paid	\$'000 —	—	2 819	4 742	5 578	6 404

(a) At 30 June.

The classes of widows are as follows: (i) a class A widow has one or more dependent or student children in her care; (ii) a class B widow is at least 50 years of age, or 45 years when her class A pension ceases (because she no longer has a child in her care); and (iii) a class C widow is under 50, without children, and in necessitous circumstances in the 26 weeks following her husband's death. The term 'widow' includes a deserted wife, a divorcee and a woman whose husband has been imprisoned for at least six months or is a patient in a mental hospital. Certain 'dependent females' may also qualify for pension.

Unemployment, Sickness and Special Benefits

To receive unemployment benefit, a person must be out of work (but not through being a direct participant in a strike), must be capable of undertaking and willing to undertake suitable work and have taken reasonable steps to obtain employment. Registration with the Commonwealth Employment Service is necessary; payment is at the discretion of the Department of Social Security.

Sickness benefit may be paid to a person temporarily unable to work because of sickness or accident and who has suffered a loss of income because of this. A married woman is not eligible to receive a sickness benefit if it is reasonably possible for her husband to maintain her. Where the husband is able to maintain her partially, a benefit may be paid at a rate considered reasonable in the circumstances.

Benefits are not payable to people qualified to receive invalid, age, widows' or service pensions, supporting parents' benefits, or tuberculosis allowances. The minimum age is 16 years, the maximum 65 (male) and 60 (female). There are no nationality restrictions, but if a claimant has not been resident in Australia for one year before making the claim, the Department must be satisfied that he intends to live here permanently. The basic rates of benefit are generally the same as those for age and invalid pensions except that the maximum benefit for single persons under 18 years of age is \$36 per week.

The next table gives Tasmanian details for unemployment, sickness and special benefits:

Unemployment, Sickness and Special Benefits, Tasmania
Beneficiaries and Payments

Particulars	1972-73	1973-74	1974-75	1975-76	1976-77	1977-78
Unemployment benefits—						
Claims granted	no. 12 536	11 562	22 088	30 930	23 860	27 337
Persons on benefit—						
At 30 June	no. 2 330	1 769	3 555	7 228	7 078	9 757
Weekly average	no. 2 073	2 089	4 439	6 302	7 161	8 538
Benefits paid	\$'000 2 095	3 125	7 746	15 256	17 963	23 398

Unemployment, Sickness and Special Benefits, Tasmania
Beneficiaries and Payments—continued

Particulars		1972-73	1973-74	1974-75	1975-76	1976-77	1977-78
Sickness benefits—							
Claims granted	no.	3 295	3 739	4 144	5 018	4 635	4 284
Persons on benefit—							
At 30 June	no.	583	604	682	1 064	959	816
Weekly average	no.	499	642	632	772	933	887
Benefits paid	\$'000	792	1 247	1 692	2 409	2 380	2 385
Special benefits—							
Claims granted	no.	459	574	800	1 760	1 822	1 792
Persons on benefit—							
At 30 June	no.	148	172	297	471	469	516
Weekly average	no.	136	148	215	359	461	476
Benefits paid	\$'000	128	224	421	811	979	804
Total benefits—							
Claims granted	no.	16 290	15 875	27 032	37 708	30 317	33 413
Persons on benefit—							
At 30 June	no.	3 061	2 545	4 534	8 763	8 506	11 089
Weekly average	no.	2 708	2 879	5 286	7 433	8 555	9 901
Benefits paid	\$'000	3 015	4 596	9 859	18 476	21 322	26 587

A special benefit may be granted to a person not qualified for a pension or an unemployment or sickness benefit if, because of age, physical or mental disability, domestic circumstances, or for other valid reasons, he is unable to earn a sufficient livelihood for himself and his dependants. Recipients of special benefits include, among others, persons caring for invalid parents and persons ineligible for age, invalid or widower's pensions because of lack of residence qualifications.

Income Taxation Applicable to Pensions and Benefits

Income from age, wives' or widows' pensions and supporting parents', unemployment, sickness or special benefits is classified as taxable income but the amount received in a full year is usually less than the level at which income tax becomes payable. If other income is earned and this raises total income above the minimum level, normal income tax provisions apply. Invalid and blind pensions are exempt from taxation.

Maternity Allowances

Maternity allowances were introduced in 1912. There was no income test and any mother was entitled to a maternity allowance if she gave birth to a child in Australia and if she resided in or intended to remain in Australia. Payment of maternity allowances in respect of births occurring after 31 October 1978 were abolished in the Federal Budget of August 1978.

The following table shows payments made in Tasmania during recent years:

Maternity Allowances, Tasmania

Particulars		1972-73	1973-74	1974-75	1975-76	1976-77	1977-78
Claims	no.	7 615	7 296	7 225	7 210	6 729	6 836
Amount	\$'000	241	230	229	227	r 212	213

Orphans' Pension

The 1973 Budget introduced the double orphans' pension, which is payable to institutions or persons caring for a child whose parents are both dead or one parent is dead and the other parent cannot be located. At 30 June 1978 there were 99 orphans for whom pensions were being paid. Total payments in 1977-78 were \$52 000.

Handicapped Child's Allowance

The handicapped child's allowance is payable to the parents or guardians of a severely physically or mentally handicapped child who is living in the family home and needs constant

care and attention. At 30 June 1978, allowances were being paid with respect to 520 children (112 new allowances were granted during 1977-78) and payments during 1977-78 totalled \$385 000.

Family Allowances

With the introduction of personal income tax indexation for the 1976-77 income year, tax rebates in respect of dependent children were abolished but this was offset by significant increases in family allowances (previously called 'child endowment') payments payable to persons (usually the mother) with dependent children. From 1 July 1976, the family allowances payable in respect of dependent children under 16 years of age, or over 16 but under 25 years of age and receiving full-time education, were as follows: first such child, \$3.50 per week; second child, \$5; third child, \$6; fourth child, \$6; fifth and later children, \$7. The family allowances were not subject to automatic annual indexation and have remained unchanged since 1 July 1976. The increase in the 'all groups' Consumer Price Index, weighted average of the six state capital cities, from the September quarter 1976 to the September quarter 1978 was 22.0 per cent. One year's residence in Australia is required if the mother and child were not born here, but this requirement is waived if the Department is satisfied they intend to remain here permanently.

The following table shows family allowance statistics for Tasmania for recent years:

Family Allowances
Child and Student Dependents and Payments

Particulars	1972-73	1973-74	1974-75	1975-76	1976-77	1977-78
Dependent children and students (a)—						
Children in endowed families (b) no.	128 297	126 595	126 461	125 391	(c) 129 054	(c) 127 806
Children in approved institutions (b) no.	440	388	399	309	(c) 340	(c) 360
Students (d) no.	5 834	5 911	5 894	5 911	—	—
Total no.	134 571	132 894	132 754	131 611	129 394	128 166
Amount paid during year . . \$'000	(e) 8 195	7 212	7 099	(f) 7 766	31 197	30 968

(a) Number at 30 June.

(b) Children under 16 years.

(c) Includes dependent students under 25 years.

(d) Students 16 but under 21 years; includes students in approved institutions to 1975-76.

(e) Five 12-weekly payments.

(f) Includes some payments of the increased family allowances.

Rehabilitation Service

This service aims to fit handicapped people for employment by supplying medical and hospital treatment, surgical aids and appliances and, where necessary, arranging special education and training courses in industry, trade, commerce, public service, etc. Although employment is specifically the responsibility of the Federal Department of Employment and Industrial Relations, vocational counsellors arrange employment with suitable employers and follow up progress.

Rehabilitation training is given if the disability is a substantial handicap to engaging in full employment. Disabled people who do not qualify for free service may pay for rehabilitation themselves or may be sponsored by private or government organisations. In Tasmania, the Department's rehabilitation centre is located in Hobart.

The following table shows the numbers accepted for rehabilitation and placed in employment in Tasmania:

Operation of the Rehabilitation Service

Particulars		1972-73	1973-74	1974-75	1975-76	1976-77	1977-78
Persons—							
Accepted for rehabilitation	no.	82	109	131	134	159	169
Placed in employment	no.	45	47	82	74	101	73
Expenditure (a)	\$'000	133	176	321	440	525	461

(a) Excludes capital expenditure on sites and buildings and administrative costs of the Rehabilitation Service.

Homes for the Aged or Disabled

The *Aged or Disabled Persons' Homes Act 1974* provides for building subsidies and separate land subsidies on a \$2 for \$1 basis (up to a maximum amount, which is determined from time to time). The current maximum subsidies are for a single unit, \$11 130; double unit, \$12 910; and for land for a unit, \$1 920. These subsidies are payable to approved organisations intending to build or acquire homes for aged or disabled persons. The aim is to provide homes in which the conditions approach normal domestic life. ('Homes' in this context does not refer to houses built under Federal-State Housing Agreements.)

During 1977-78, 14 grants were approved under the *Aged or Disabled Persons Homes Act 1954*; the amount granted was \$497 877.

Personal Care Subsidy: A subsidy of \$15 per week is payable to eligible organisations in respect of all persons who receive approved personal care in hostel-type accommodation in an aged persons' home eligible under the *Aged or Disabled Persons Homes Act 1954*, and for whom National Health Benefit is not received. During 1977-78, 19 organisations cared for 490 qualified residents and received subsidies totalling \$375 360.

Delivered Meals Subsidy: A subsidy at the rate of 25 cents (plus five cents if vitamin C supplement provided) for each delivered meal is payable to approved organisations providing a 'meals-on-wheels' service. In 1977-78, 24 organisations in Tasmania provided approved meal services, and subsidy payments totalled \$80 355.

Handicapped Persons Welfare

The *Handicapped Persons Assistance Act 1974* provides assistance for the following prescribed services relating to handicapped or disabled persons: (i) training; (ii) activity therapy; (iii) sheltered employment; (iv) residential accommodation; (v) holiday accommodation; (vi) recreational facilities; and (vii) rehabilitation facilities.

Assistance toward approved expenditure is given to organisations under the Act by a \$4 for \$1 subsidy towards: (i) the capital cost of projects; (ii) the cost of building maintenance; (iii) the rental of premises; and (iv) the cost of equipment. In addition salary subsidies of up to 100 per cent are payable for the first two years after an organisation has commenced to provide a prescribed service and a 50 per cent subsidy is payable in all other cases. A training fee of \$500 is payable to a sheltered workshop for each disabled person placed in open employment for a period of not less than 12 months. Federal Government expenditure in Tasmania on assistance to handicapped persons under the *Handicapped Persons Assistance Act* in 1977-78 was \$393 654.

Child Care

Organisations may receive financial assistance for a range of child care projects including full day care, occasional and emergency care. Both capital and recurrent grants are available.

Migrant Welfare

Social workers are available to assist people with personal problems. There are also migrant welfare officers and a community interpreter service available to assist migrants.

State Department of Social Welfare

Expenditure

Activities of this State Government Department are grouped under Child Welfare and Relief Divisions. The following table shows expenditure over a five-year period:

Department of Social Welfare: Expenditure
(\$'000)

Particulars	1972-73	1973-74	1974-75	1975-76	1976-77
Administration and general	762	941	1 525	1 770	2 192
Relief Division	1 043	826	1 008	1 304	1 734
Child Welfare Division	408	477	632	774	830
Grants to organisations	149	157	174	160	361
Total	2 363	2 401	3 339	4 008	5 117

In 1976-77 the major expenses were: under Relief Division, fuel allowances for eligible pensioners, \$247 000 and relief and maintenance, \$1 371 000; under Child Welfare Division, maintenance of boarded-out children, \$395 000 and contributions towards maintenance of children in approved institutions, \$239 000; and under grants to organisations, Tasmanian Institute for Blind and Deaf, \$145 000.

Relief Division

The functions of this Division are to investigate applications for assistance from needy mothers with dependent children and to give cash relief where necessary; to issue fuel allowances (subject to an income test) to age and invalid pensioners; and to help pay for funerals, transport, furniture removals, artificial limbs, spectacles, etc., for persons in needy circumstances. Special grants are made to deserted wives (and sometimes deserted husbands) left with children, wives with husbands in gaol, to certain persons awaiting receipt of federal benefits or pensions, and to relatives supporting deserted children.

Child Welfare Division

The work of this Division includes the investigation of complaints that children are neglected or inadequately controlled; the supervision of neglected children in their own homes to avert the need for more drastic action; the investigation of cases to appear in Children's Courts; the supervision of children under court order; the placement and supervision of children made wards of the State; the control of the Department's receiving and other homes; the recovering of maintenance costs, where possible, from parents of children who are a charge on the Department; the licensing and supervision of children's boarding homes and day nurseries; the supervision of child migrants; and welfare of children referred by courts in divorce actions. (Statistics relating to children appearing before Children's Courts are included in Chapter 16.)

Where, because of illness, a mother is unable to undertake her normal duties, accommodation may be provided for her children at Rochembank Hostel in Hobart, or at other suitable residences throughout the State.

Adoption of Children: Women child welfare officers investigate applications by prospective adoptive parents and interview mothers wishing to place their children for adoption. Applications for adoption of children are heard by a magistrate. There were 185 orders for adoption made in 1976-77.

Wards of the State and Supervised Children

Children are made wards of the State either on application of a parent or relative (e.g. in the case of both parents' death or desertion) or by a court order. Children may remain wards until they reach the age of 18. Wards, while under the supervision of a welfare officer, are often returned to their home and in such cases wardship is frequently terminated, as it is with those who successfully take up employment.

At 30 June 1977, there were 1 273 children under State control or supervision. Of these children 480 were under legal supervision of child welfare officers as a result of court-imposed supervision orders and 793 were wards of the State.

Wards are placed in: (i) foster homes (mostly ordinary family homes); and (ii) children's homes (private and departmental). The Department makes payments, based on the child's

age, for wards in foster homes and contributes to non-departmental institutions for the maintenance of State wards. From 1 October 1977 these payments were set at from \$17 to \$19.50 per week.

Approved children's homes and foster homes are assisted with major items of clothing. The Department accepts responsibility for hospital expenses and cost of dentistry for wards of the State where this treatment is not available from school dental or hospital services. Optical expenses are also met where necessary. Pocket money, varying from 50 cents to \$2 per week is provided for children in foster homes. Assistance, at the rate of \$15 per week from 1 October 1977, is also available in respect of certain non-wards, who are orphans or abandoned, in the care of the managers of approved children's homes.

The following table gives details relating to the location of wards of the State and the numbers of children made wards and ceasing to be wards, for the last five years:

Wards of the State: Location, Admissions and Discharges
(Number)

Particulars	1972-73	1973-74	1974-75	1975-76	1976-77
Location at 30 June—					
In homes—					
Departmental	106	105	94	78	77
Other children's homes	202	163	179	159	147
Foster	378	390	390	329	300
With parents or relatives	155	201	201	232	207
In private lodgings	61	39	35	27	30
Other (a)	25	41	37	41	32
Total	927	939	936	866	793
Children made wards during the year—					
By courts—Delinquent	66	42	50	40	36
Neglected	50	76	90	33	24
On parents' or guardians' request—					
Neglected (uncontrolled) (b)	5	7	1	—	—
Deserted, or parents unable to provide (c)	45	59	40	31	40
Total	166	184	181	104	100
Children ceasing to be wards during the year—					
Adopted	21	28	27	37	25
Supervision not needed, age, etc.	155	144	157	137	148
Total	176	172	184	174	173

(a) Children in hospitals, other government institutions, missing, etc.

(b) Neglected—unfit for guardianship.

(c) Destitute and/or homeless.

The next table shows Government expenditure on wards of the State:

Wards of the State: Government Expenditure
(\$'000)

Particulars	1971-72	1972-73	1973-74	1974-75	1975-76	1976-77
Expenditure on departmental homes	341	384	412	703	760	843
Maintenance of children—						
In foster homes	178	179	244	325	387	395
In non-departmental homes	103	120	113	162	213	239
Total expenditure	622	683	769	1 190	1 360	1 477

Departmental Homes: The State's 13 receiving homes, which provide temporary accommodation for children, are maintained at Hobart, Launceston, Wynyard and Devonport.

Ashley Home for Boys, Deloraine, provides care and training for older wards who, because of maladjustment or delinquency, require special institutional control.

Wybra Hall, Mangalore, provides care and training for younger wards and boys on remand. Ages range from eight to 15 years and those admitted have problems of maladjustment or delinquency.

Westwinds, Woodbridge, is a home for intellectually and educationally retarded boys who range in age between five and 15. Boys of school age attend various schools in the area where there are special facilities recommended by the Educational Guidance Authorities as suitable for meeting their individual needs.

Weeroona Girls' Training Centre, Latrobe, provides for those adolescent girls in the care of the Department who require special institutional supervision and training. Girls of school age receive correspondence school education and older girls are trained in various aspects of domestic work.

Non-departmental Homes: Other children's homes in which wards are placed are: Kennerley Children's Homes at Claremont and Chigwell; Salvation Army Boys' Home, Salvation Army Girls' Home, St Joseph's Child Centre, Bethany Boys' Hostel, Mt St Canice Convent and Hillcrest, all in Hobart; Yalambee Hostel, Glenorchy; Clarendon Home, Kingston; Girls' Home and Glenara Home for Boys, Launceston; Glendel in Deloraine; Glenhaven in Devonport and Ulverstone; and Roland Boys' Home, Sheffield.

REPATRIATION SERVICES AND PENSIONS

General

The Department of Veterans' Affairs was originally established as the Repatriation Commission under federal legislation in 1920. The Department is responsible for: (i) the payment of disability and service pensions to eligible veterans and their dependents; (ii) the provision of medical treatment to veterans for injuries and illnesses caused or aggravated by their war service; (iii) the provision of medical treatment to widows and dependants of deceased veterans whose deaths were due to war service; (iv) the provision of medical treatment in certain circumstances to veterans who are suffering from injuries and illnesses not caused or aggravated by war service; and (v) medical treatment for veterans of the 1914-18 War and the Boer War. The Department is also responsible for functions administered by the Defence Service Homes Corporation and the Office of Australian War Graves.

Benefits are provided in respect of service in the 1914-18 and 1939-45 Wars, in the Korea and Malaya operations, with the British Commonwealth Far East Strategic Reserve and the Special Overseas Forces including veterans from the Vietnam operations. Certain members of the defence forces serving on or after 7 December 1972 are also eligible for benefits.

Repatriation Pensions

Disability pensions are payable, without general application of an income test, for war-caused or war-aggravated disabilities. Service pensions are payable in the main, to male veterans 60 years and over (and female veterans 55 years and over) subject to an income test; no disability need be claimed.

Disability and dependant's pensions may be granted to persons, or to dependants of persons, who come within the following categories and who suffered death or disability: (i) arising from any occurrence before discharge, or on overseas war service or on service in Australia within certain areas; (ii) attributable directly to service where the member served only in Australia; (iii) from pulmonary tuberculosis where the member served in any theatre of war; and (iv) from aggravation of a condition existing at enlistment where camp service exceeded six months.

Those who receive disability pensions are also eligible for free medical and hospital treatment for their pensionable disabilities. With certain categories of pensioners, the eligibility for free treatment is widened to cover all disabilities. It is also possible for a veteran to qualify for free treatment for a disability without necessarily being granted a pension.

Service and dependant's pensions may be granted to persons (or to dependants of persons) who come within the following categories and satisfy an income test: (i) men aged 60

or over who served in a theatre of war or women 55 years and over who served abroad; (ii) men and women with similar service particulars who are permanently unemployable; (iii) sufferers from pulmonary tuberculosis. The conditions governing the income test are the same as for old age pensions described earlier in this chapter.

Details of selected repatriation benefit rates are shown in the following table:

Repatriation Benefits (a) (\$ Per Week)				
Benefit	Rate			
	At 4 Nov. 1976	At 5 Mar. 1977	At 3 Nov. 1977	At 4 May 1978
PAYABLE WITHOUT INCOME TEST				
Disability pensions—				
Special rate (T.P.I.) pensions—				
Veteran	83.25	90.15	94.40	98.55
Wife	4.05	4.05	4.05	4.05
Each child	1.38	1.38	1.38	1.38
Intermediate rate pensions—				
Veteran	57.35	62.10	65.00	67.85
Wife	4.05	4.05	4.05	4.05
Each child	1.38	1.38	1.38	1.38
General rate pensions (maximum rates)—				
Veteran	31.45	34.05	35.65	37.20
Wife	4.05	4.05	4.05	4.05
Each child	1.38	1.38	1.38	1.38
War widows—				
Pension	43.50	47.10	49.30	51.45
Domestic allowance	12.00	12.00	12.00	12.00
Orphans' pensions—				
One parent dead—				
Each child	10.45	10.45	10.45	10.45
Both parents dead—				
Each child	20.90	20.90	20.90	20.90
PAYABLE SUBJECT TO INCOME TEST (MAXIMUM RATES)				
Service pensions—				
Veteran—Standard (single person)	43.50	47.10	49.30	51.45
Married	36.25	39.25	41.10	42.90
Addition for each child	7.50	7.50	7.50	7.50
Wife's pension (if she is not a pensioner)	36.25	39.25	41.10	42.90
Guardians' allowances—				
Where there is a child under six years or an invalid child requiring full-time care	6.00	6.00	6.00	6.00
Other cases	4.00	4.00	4.00	4.00

(a) Details relating to conditions of eligibility for the various pensions are available from the Department of Veterans Affairs.

Disability Pension Payments

The following table shows, for Tasmania, the number of pensions in respect of veterans and their dependants, together with expenditure on disability pensions:

Disability Pensions: Pensioners and Payments

Year	Number of pensions current at 30 June				Expenditure during year (a) (\$'000)
	Incapacitated veterans	Dependents of—		Total	
		Incapacitated veterans	Deceased veterans (b)		
1972-73	8 503	11 360	2 042	21 905	9 857
1973-74	8 358	11 602	2 027	21 987	11 176
1974-75	8 219	11 231	2 015	(c) 21 474	13 697
1975-76	8 120	10 670	1 978	(c) 20 778	14 827
1976-77	7 950	10 182	1 916	(c) 20 062	16 637
1977-78	7 734	9 169	1 941	18 844	18 676

(a) Includes widows' allowances.

(b) Includes war widows' pensions.

(c) Includes miscellaneous pensions not specified under the 'veteran' details, e.g. seamen's war pensions and allowances.

At 30 June 1978 the proportions of veterans in Tasmania receiving disability pensions were: in respect of service in the 1914-18 War, 5.7 per cent; the 1939-45 War, 87.9 per cent; the Korea and Malaya operations, 1.7 per cent, and other operations 4.7 per cent.

Service Pension Payments

The following table shows, for Tasmania, the number of service pensions in respect of veterans and their dependants, and expenditure on pension payments:

Service Pensions: Pensioners and Payments

Year	Number of pensions current at 30 June				Expenditure during year (\$'000)
	Veterans	Dependants of—		Total	
		Living pensioners	Deceased pensioners		
1972-73	2 638	1 402	122	4 162	2 827
1973-74	3 093	1 541	129	4 763	4 362
1974-75	3 433	1 822	120	5 375	6 668
1975-76	3 843	2 150	112	(a) 6 163	(a) 9 313
1976-77	4 386	2 564	119	(a) 7 162	(a) 12 327
1977-78	4 945	3 094	62	8 101	15 722

(a) Includes British Commonwealth pensions.

Medical Services

To discharge these functions in Tasmania, the Department of Veterans' Affairs maintains a branch office, a general hospital and an artificial limb and appliance centre in Hobart. Facilities exist at the Repatriation General Hospital for medical treatment of hospitalised patients and specialist services for out-patients. Generally treatment for out-patients throughout the State is provided by doctors appointed by the Department as Local Medical Officers. People entitled to treatment can select a doctor from the panel of L.M.O.s and receive treatment at departmental expense. Payment for treatment in hospitals other than the Repatriation General Hospital is met by the Department only in certain circumstances.

Benefits include: (i) free treatment for all veterans of the Boer War and the 1914-18 War (this includes medical, hospital, dental, ophthalmological and para-medical treatment and, subject to a contribution of \$49 per week, treatment in nursing homes); (ii) veterans, who are suffering from malignant cancer, are for that condition eligible for free medical and hospital treatment and, subject to a contribution of \$49 per week, to nursing home treatment; and (iii) allowing the facilities of the Repatriation Artificial Limb and Appliances Centres to be used to provide free artificial limbs to the general public. A further recent extension is the provision of free treatment, etc., for all ex-prisoners of war.

Soldiers' Children Education Scheme**Eligible Children**

Educational assistance is granted to veterans' children in particular circumstances: (i) if the parent has died from causes attributed to war service or was receiving disability pension for specific serious disabilities at the time of death; (ii) if the parent, as a result of war service, is blinded, totally and permanently incapacitated or receiving the special rate pension for pulmonary tuberculosis.

Benefits

For children under 12 years, the scheme pays the cost of school requisites and fares. At secondary level, fortnightly maximum payments are: under 14 years, \$7.40; 14 and under 16, \$11.10; 16 years and over, \$24.30 if both parents are living and \$32.00 if only one parent is living. At tertiary level, those living at home may receive \$48.00 per fortnight and those living away from home, \$79.80.

HEALTH SERVICES**Department of Health Services****Headquarters**

Responsibilities of the headquarters of the Department of Health Services include:

- (i) public hospital management advisory services and the licensing of private hospitals and other medical establishments under the *Hospitals Act 1918*;
- (ii) District Medical Service;
- (iii) School Dental Service;
- (iv) Nurses' Registration Board and Dental Mechanics' Registration Board;
- (v) Tourist Nursing Service;
- (vi) legislation concerned with health and allied matters;
- (vii) certain specialist medical services;
- (viii) State Drug Advisory Committee;
- (ix) liaison with the health departments of other states and the Federal Government (the Director-General of the State Department is a member of the National Health and Medical Research Council and the (National) Hospital and Allied Services Advisory Council); and
- (x) liaison with professional, medical, dental and nursing associations.

The Director-General is the controlling authority under the Hospital Employees' Award, the Medical Officers' Award and the Nurses' (Public Hospitals) Award. Headquarters also controls and maintains Crown property occupied by the various sections of the Department and deals with the appointment and salaries of staff who are not officers of the Public Service.

General

The State Department of Health Services is responsible for the maintenance of the health of the community, the prevention of disease and the provision of government hospital and medical services. The Department is under the jurisdiction of the Minister for Health, with the Director-General of Health Services as its permanent head. Two specialised services are part of the Department: the State Health Laboratory under the direction of the Government Pathologist; and the Government Analyst and Chemist Laboratory under the control of the Government Analyst.

Department of Health Services: Expenditure from Consolidated Revenue
(\$'000)

Particulars	1973-74	1974-75	1975-76	1976-77	1977-78
Administration, head office	476	665	705	943	1 009
Hospital and medical services—					
Administration	393	518	520	676	636
Grants to hospitals	19 193	33 030	40 057	53 630	61 877
Medical services, country districts	248	342	416	471	441
Dental Health Service	669	1 164	1 421	2 348	2 627

Department of Health Services: Expenditure from Consolidated Revenue—continued
(\$'000)

Particulars	1973-74	1974-75	1975-76	1976-77	1977-78
Nurses' Registration Board	8	12	8	19	22
Ambulance Commission	265	594	713	1 136	1 152
Government Analyst and Chemist	188	265	287	308	347
St John's Park Hospital	2 326	3 920	4 696	5 506	6 262
Public Health—					
Administration and inspectors	425	475	586	635	677
School Medical Service	268	365	422	405	506
Child Health Service	311	424	505	566	667
Community Health Services	—	62	543	1 104	1 724
Tuberculosis	343	517	558	567	118
Miscellaneous grants and expenses	881	1 239	1 142	1 260	2 003
Total	25 993	43 591	52 579	69 574	80 068

School Dental Health Service

This service, available free to children up to school leaving age, aims to examine and treat every child each six months, but continued staff shortages have prevented this from happening. At the end of June 1978, 45 static clinics were established at urban centres throughout the State while 31 mobile units provided services in most country districts. An orthodontic service is based in Hobart and there are permanent clinics in Launceston and Devonport.

Dental Therapy: Adopting the New Zealand system, Tasmania became the first Australian State to develop a School of Dental Therapy. Seventeen first-year and 17 second-year students, including several students trained on behalf of the Federal Government (these are employed in the Australian Capital Territory after graduation) underwent training in 1978. Ten classes have graduated since January 1968 (after two year courses) and the graduates have been appointed to clinics. The school is located in Hobart and has a residential hostel attached providing accommodation for 30 students. It is hoped that a total of 100-140 dental therapists will work in rural and metropolitan areas by 1980; a recognised dental nursing certificate is required for a nurse to be appointed to such a field position.

Fluoridation

In 1953 Beaconsfield became the first local government authority to add fluoride to its water supply and Launceston followed in 1961. In 1964 Hobart became the first Australian capital city to add fluoride to its water supply.

A Royal Commission inquired into fluoridation of water supplies in 1968. It reported favourably and recommended its extension throughout the State. The State Government passed the *Fluoridation Act 1968*, setting up a Fluoridation Committee with power to recommend to the Minister for Health the fluoridation of any public water supply and to oversee fluoridation operations. It is required to report annually to the Minister who must lay the report before Parliament.

By July 1976, fluoridation had been extended to include: the whole of the greater Hobart area served by the Derwent and Southern Regional Water Supply Schemes, extending as far afield as Sorell, Campania, Kempton, New Norfolk and Snug; the City of Launceston and surrounding areas supplied by the West Tamar and North Esk Regional Water Supplies; and numerous towns supplied by individual schemes including Burnie, Devonport, Smithton, Waratah, Queenstown, Deloraine, Scottsdale, St Helens, Campbell Town, Oatlands, Strathgordon, Huonville, Ranelagh, Cygnet, Geeveston, Dover and Alonnah.

District Medical Service

In 1937 the Government undertook to help the more remote municipalities obtain medical services. Up until June 1975, participating municipalities levied a rate under the *Local Government Act 1962*, as amended, and met between one-half and one-third of the cost of the scheme. From July 1975, the Federal Government has contributed 50 per cent of the operating costs of the scheme by means of a Health Program Grant under the *Health Insurance Act*, the remaining 50 per cent being financed from State funds. Participating municipalities currently contribute only a nominal amount.

The scheme provides a general practitioner service free to all residents of the municipality for consultations and home visits. A surgery is usually attached to the district medical officer's house and branch surgeries are sometimes located elsewhere within the district. Attention out-of-hours is charged for in accordance with Medibank rates, as are insurance medical examinations and compensation treatment.

As well as general practice, activities include the dispensing of drugs if no chemist is available; duties as Medical Officer of Health (under the *Public Health Act*) if a municipal council requests it; in some cases duty as superintendent if there is a district hospital within the municipality; attention to district nursing hospitals; and post mortem examinations.

Pharmaceutical Services Section

The Pharmaceutical Services Section has numerous advisory, supervisory and regulatory functions under regulations and legislation relating to narcotics, poisons, and dangerous and therapeutic drugs.

Alcohol and Drug Dependency Board

This Board was established under the *Alcohol and Drug Dependency Act* 1969; its members are appointed by the Minister for Health from the medical, pharmaceutical, social service, police and legal professions. Its functions are: (i) to keep under review all matters relating to the prevention and treatment of alcohol and drug dependency; (ii) to advise on the declaration and control of substances as drugs under the Act; and (iii) to act as a board of appeal for applications by patients for discharge from treatment centres.

The treatment and rehabilitation of sufferers of alcohol and drug dependency is handled by the Mental Health Services Commission; the Commission's acute psychiatric units (at Wynyard, Devonport and Launceston), the Royal Derwent Hospital at New Norfolk, the Royal Hobart Hospital and the John Edis Hospital at New Town have been declared treatment centres.

State Drug Advisory Committee

This advises on the nature, strength and variety of drugs to be supplied to public hospitals and institutions by the medical store of the Supply and Tender Department. It is not concerned with administration but helps the store to avoid stocking drugs with different names but similar properties, and stocking drugs not likely to be required.

Nursing

Nursing training is under the control of the Nurses' Registration Board. Of the State's nursing training schools, six are general, five are midwifery, one child health, one psychiatric and one geriatric. There are nine general and one psychiatric training schools for auxiliary nurses (nursing aides).

Tourist Nursing Service

This service is based on the fact that trained nursing sisters from outside Tasmania like to visit the State and have a working holiday. These 'tourist nurses' are employed for short periods in hospitals or district nursing centres. No more than two months service at any one time is required of a sister in any one place but she may stay longer.

Division of Public Health

General

The Division of Public Health has responsibility for the preventive medical services of the State. The Director is responsible for the operation of the *Public Health Act* 1962 (as amended) and the control of medical officers of health and other health officers employed by the Department of Health Services and municipalities throughout the State. A major responsibility is public immunisation programs, conducted through the municipalities; preparations distributed include the Sabin anti-poliomyelitis vaccine and the triple antigen vaccine (against whooping cough, tetanus and diphtheria). The Division is responsible for the Nutrition Advisory Service; industrial hygiene; environmental sanitation; pure food and pure drug quality control; and the public health aspects of the building regulations. Other major functions are discussed separately in the following sections.

Notifiable Diseases

Certain diseases are notifiable under the *Public Health Act 1962*, the aim being to prevent or check their spread. The following table shows the incidence of notifiable diseases in Tasmania for a five-year period:

**Notifiable Diseases Reported to Department of Health Services
(Number of Cases)**

Particulars	1972-73	1973-74	1974-75	1975-76	1976-77
Cholera	1	-	-	-	-
Gonorrhoea	162	230	222	140	160
Hydatids	7	9	5	4	1
Infectious hepatitis	55	36	59	284	244
Leptospirosis	-	1	-	4	-
Malaria	1	1	2	1	1
Salmonella infections	33	27	53	21	49
Serum hepatitis	-	1	-	1	-
Shigella infections	21	14	2	1	1
Syphilis	2	4	4	1	1
Tetanus	1	-	-	-	2
Tuberculosis	54	48	41	44	22
Typhoid fever (incl. paratyphoid)	1	-	1	-	-
Total	338	371	389	501	481

Special conditions apply to venereal diseases. Persons suffering from them must not marry until cured, or engage in the manufacture or distribution of foodstuffs, and are liable to arrest and detention if they fail to continue treatment until cured.

Quarantine provisions and tuberculosis are dealt with in later sections.

Child Health Service

In 1977, there were 102 Child Health Centres and 15 travelling units. Triple Certificated Child Health Sisters attached to these centres advise mothers on all aspects of caring for babies and young children. They advise mothers on infant feeding, child development and other health and social problems that occur in the family. The sisters visit new born babies at home and continue the supervision either at home, or, more commonly, in the Child Health Centre where individual records are maintained. Sisters also arrange for examinations to be carried out by family doctors under the Pre-School Medical Scheme. Departmental Medical Officers carry out the examinations in Child Health Centres. Voluntary Child Health Committees working for the centres raise money for furnishing and equipping new centres which are usually built by the Department. They also meet running costs such as heating, lighting, cleaning and telephones.

The Mothercraft Home: This home, located in Hobart, provides training for qualified nursing sisters who want to gain child health nursing certificates and for women who want to become mothercraft nurses. It accommodates children under two years old who need care or who cannot be looked after at home, and mothers learning to look after children or having feeding problems. When space is available, children under two years old can be boarded in the Home for short periods.

School Health Service

This is available free to children attending government and independent schools from kindergarten to matriculation level. Each school is visited annually by school medical officers who fully examine children at entry and in their eleventh and fifteenth years. In addition, children known to have defects are reviewed and special examinations are arranged for children whose physical health, behaviour or educational progress may be causing concern. Every year about 30 000 children are examined by school doctors. About 20 per cent are found to have some defect, and these are referred to family doctors, specialists and hospital clinics and other appropriate agencies for investigation.

School nursing sisters visit schools regularly to supervise the health and hygiene of pupils. They maintain medical records, perform cleanliness inspections, test sight and hearing, assist at medical examinations and follow-up cases in which defects are diagnosed. They contribute to health education and research projects and may organise immunisation sessions at their schools.

Health Education

The Health Education Council is composed of representatives of the Division of Public Health, the Education Department, the Mental Health Services Commission, the Adult Education Board and other interested persons. The Council's aim is public education by distribution of information on health matters.

Handicap Assessment Centres

Assessment Centres have been established in Hobart, Launceston and Burnie. The staff comprises medical officers, nursing sisters, psychologists, occupational therapists and welfare officers. Children referred to these Centres because of a known handicap or only suspected of having a handicap are assessed using a team approach. Specialists in other areas, e.g. education, mental health and specialist clinics in hospitals are consulted and asked to contribute to case conferences.

Mental Health Services Commission

Introduction

Significant advances have been made in the field of clinical psychiatry and in the treatment of mental illness during the past three decades. The development of psychotropic drugs, new therapeutic techniques and improved methods of clinical practice have revolutionised the mental hospital from an institution for the incarceration of lunatics to a modern hospital geared to the care and rehabilitation of the sufferers of psychiatric disorders.

Administration

The Mental Health Services Commission was established under the *Mental Health Services Act 1967*, following an interdepartmental investigation into psychiatric services in Tasmania. The Commission comprises three members: a Medical Commissioner, a Clinical Commissioner (being Professor of Psychiatry at the University of Tasmania) and an Administrative Commissioner. Since 1 July 1968, the Commission has operated as a statutory authority, completely separate from the Department of Health Services.

Ultimately, the Mental Health Services Commission aims to provide integrated community services and to this end has established acute psychiatric units at Launceston, Wynyard and Latrobe. These regional units are closely linked to the public hospital complexes.

In September 1972, the Commission formally took over the Tasmanian Chest Hospital at Creek Road, Hobart and re-named the institution the John Edis Hospital. The facilities at this hospital have enabled the services for alcoholism and psychiatric disorders, formerly carried out at Clare House, New Town, to be expanded.

The principal institution under the control of the Commission is the Royal Derwent Hospital.

Royal Derwent Hospital

The following table shows the diagnosis of mental illness of patients in the Royal Derwent Hospital (incorporating Millbrook Rise):

Royal Derwent Hospital (a)
Diagnosis of Mental Disorder of Patients, 1976-77

Mental Disorder	Patients admitted (b) 1976-77			Patients at 30 June 1977		
	Males	Females	Total	Males	Females	Total
Senile and pre-senile dementia	9	27	36	20	42	62
Alcoholic psychosis	10	5	15	17	8	25
Psychosis with intracranial infection	—	—	—	1	—	1
Psychosis with other cerebral condition	7	6	13	6	14	20
Psychosis with other physical condition	3	1	4	—	3	3
Schizophrenia	48	41	89	115	73	188
Affective psychoses	24	31	55	7	25	32
Paranoid states	3	2	5	8	7	15
Other psychoses	3	2	5	2	3	5
Neuroses	13	13	26	6	10	16
Personality disorders	46	26	72	16	13	29
Alcoholism	215	14	229	38	6	44
Drug dependency	5	6	11	—	—	—
Transient situational disturbances	8	4	12	—	—	—
Behaviour disorders of childhood	—	1	1	—	—	—
Mental disorders not specified as psychotic associated with physical conditions	10	6	16	7	4	11
Mental retardation—						
Borderline	7	7	14	3	4	7
Mild	16	8	24	24	13	37
Moderate	27	19	46	58	48	106
Severe	9	14	23	59	62	121
Profound	5	2	7	24	26	50
Unspecified	10	7	17	13	2	15
Other	10	6	16	—	—	—
Total	488	248	736	424	363	787

(a) Includes Millbrook Rise Hospital.

(b) Excludes those returned from leave.

Royal Derwent Hospital (a), Patients at 30 June 1977 by Mental Disorder: Summary

Mental disorder	Number	Per cent	Mental disorder	Number	Per cent
Senile and pre-senile dementia	62	7.9	Alcoholism	44	5.6
Alcoholic psychosis	25	3.2	Mental retardation	336	42.7
Schizophrenia	188	23.9	Other	100	12.7
Affective psychoses	32	4.1	Total	787	100.0

(a) Includes Millbrook Rise Hospital.

The Royal Derwent Hospital (at New Norfolk) is the State's principal centre for the treatment of psychiatric disorders and for caring for the mentally retarded. The hospital is divided into six sections and patients are allocated to the sections on the basis of their medical diagnosis. The basic division of patients is into those who are psychiatric patients and those who are suffering from mental sub-normality.

The following table shows the numbers of patients admitted and discharged and deaths in the Royal Derwent Hospital (including Millbrook Rise):

Royal Derwent Hospital (a)
Number of Patients Admitted and Discharged, and Deaths, 1976-77

Particulars	Males	Females	Total
Patients at 30 June 1976	427	405	832
Patients admitted—			
First time	176	87	263
Re-admitted (including statistical re-admissions)	312	161	473
Total	488	248	736
Patients discharged, etc.—			
Discharged from hospital	264	146	410
Statistical discharges	203	116	319
Died	24	28	52
Total	491	290	781
Patients at 30 June 1977	424	363	787

(a) Includes Millbrook Rise Hospital.

NOTE: Statistical discharges are those patients who have not been officially discharged, but have been absent on leave from the hospital for more than 10 days. Should such persons require further hospitalisation, they are classified as 'Statistical re-admissions'.

Other Institutions

Hobart: (i) The Combined Children's Centre in Hobart provides treatment to psychiatrically disturbed children. New referrals to the Centre during 1976-77 totalled 471 and at 30 June 1977 there were 773 children under treatment.

(ii) In 1975 a Youth Counselling Service was commenced. Its objects include the care and psychiatric management of the adolescent with emphasis on family involvement.

Launceston: (i) The Lindsay Miller Clinic at the Launceston General Hospital reported the following attendance figures during 1976-77: out-patient visits, 4 366; day patient visits, 4 228; in-patients, 646. Psychological consultations totalled 134 and social work consultations, 2 456.

(ii) The Elonera Handicapped Children's Centre opened in 1973 and provides a day facility to cater for the education and training needs of retarded children. Attendance figures for 1976-77 totalled 2 729.

North-West: In-patient facilities are provided at the Mersey General Hospital and the Spencer Division of the North-Western General Hospital.

Various centres provide facilities for out-patient treatment on the north-west coast. During 1976-77, the North Western General Hospital, Spencer Division, treated 1 088 out-patients; Burnie Division, 1 363; Smithton District Hospital, 244; Devonport and Ulverstone Clinics, 2 039.

The Child and Adolescent Service was commenced in October 1975 with headquarters at Burnie. The aims of the service are similar in nature to the Youth Counselling Service in Hobart.

State Controlled Hospitals

General

In Tasmania, medical establishments include hospitals, nursing homes, geriatric establishments, convalescent homes, orthopaedic units, etc. Some are privately administered while the State Government accepts the major financial responsibility for others; in the case of the latter group, control is either direct or exercised through hospital boards.

Institutions controlled by the State include four general hospitals, 15 district hospitals, ten hospital annexes and district nursing centres with bed accommodation and six without, one mental hospital, two maternity hospitals and three hospitals for the aged. (The Department of Health Services directly administers one hospital for the aged.) These institutions could all legitimately be described as 'public'. However, in the tables in this section, the term 'public' is applied only to the general and district hospitals, the other types of institutions being specified separately.

General Hospitals (Public)

Hospitals providing all facilities and specialised treatment are the Royal Hobart, Launceston General, Mersey General (at Latrobe) and North-Western General (with divisions at Burnie and Wynyard). The Queen Alexandra (Hobart) and the Queen Victoria (Launceston) are maternity hospitals.

Specialist treatment is available at general hospitals in obstetrics, gynaecology, orthopaedics, urogenital surgery, plastic and reconstructive surgery, neuro-surgery and neurology, radiology, pathology, radiotherapy, psychiatry and ophthalmology; skin diseases and venereal diseases are also treated and clinics operate in thoracic medicine and surgery. An emergency obstetric service, with specialists based in Hobart and Launceston, provides a free service to the smaller public hospitals, district nursing hospitals and district medical officers outside the two cities.

The Lady Clark Hospital, an annexe of the Royal Hobart Hospital, is a rehabilitation and physiotherapy centre with both in-patient and out-patient facilities.

The Peacock Convalescent Hospital in Hobart is run by a committee of management, most of its patients being referred from the Royal Hobart Hospital.

Fees

As from 1 October 1976, the Tasmanian Government entered into an agreement with the Federal Government for the equal sharing of costs, on an approved budget basis, of net operating costs for all recognised hospitals under the *Commonwealth and State Hospital Services Agreement Act 1976*. This agreement replaced previous arrangements entered into from 1 July 1975 but which were later found to be invalid.

A public hospital patient is entitled to receive comprehensive care and treatment in hospital free of charge except in the following cases:

- (i) Hospitals may recover from the insurer, at specified rates, costs in respect of patients who may claim compensation or damages under workers compensation insurance or under the *Motor Accidents (Compensation and Liabilities) Act 1973*, or seamen covered by the *Navigation Act 1912*.
- (ii) An intermediate patient and a personal obstetric patient are permitted to have a choice of medical practitioner at the Royal Hobart Hospital; the patient pays the medical practitioner on a fee-for-service basis and an accommodation charge is payable to the hospital by the privately insured patient. A hospital service fee is levied by the hospital on the medical practitioner for the use of hospital resources in providing the fee-for-service.
- (iii) A patient of the Queen Alexandra Hospital (obstetrics) and Queen Victoria Hospital (obstetrics and gynaecology) may elect to be treated as a private patient and be treated by a medical practitioner of her choice on a fee-for-service basis and be charged by the hospital for accommodation in either a single room or other than a single room.
- (iv) As from 1 October 1976, privately insured patients treated by hospital staff have been charged an all-inclusive fee by the hospital for accommodation. Private patients are also charged a medical service fee in the four general hospitals.

State Controlled Hospitals: Finances, Staff and Patients

The following tables give summaries of the financial operations, staff and patient numbers of State controlled hospitals and hospitals for the aged:

Social Welfare and Health Services

State Controlled Hospitals and Hospitals for the Aged
Receipts and Payments (a), 1976-77
(\$'000)

Particulars	Hospitals (excluding mental)			Mental hospitals	Hospitals for the aged
	Public (b)	Maternity (c)	Total		
Receipts—					
Government aid—					
State	49 470	2 892	52 362	7 517	3 908
Federal	—	—	—	71	2 713
In-patient fees	4 634	1 193	5 827	831	1 152
Out-patient fees	146	—	146	—	120
Other	2 241	132	2 373	73	737
Total	56 491	4 217	60 708	8 492	8 630
Payments—					
Salaries and wages	44 313	3 423	47 736	6 982	6 139
Provisions	1 656	168	1 824	(d)	527
Domestic supplies	1 349	95	1 444	(d)	106
Dispensary, etc.	3 707	152	3 859	(d)	68
Other	4 904	376	5 280	(d)	740
Total	55 929	4 214	60 143	8 492	7 580

(a) Excludes expenditure from State Loan Fund.

(b) Includes general and district hospitals; includes maternity wards in public hospitals.

(c) Excludes maternity wards in public hospitals.

(d) Not available on a comparable basis; included in 'Total'.

State Controlled Hospitals and Hospitals for the Aged
Staff, Accommodation and In-Patients

Particulars	Hospitals (excluding mental)		Mental hospitals		Hospitals for the aged	
	1975-76	1976-77	1975-76	1976-77	1975-76	1976-77
Hospitals and homes	no. 22	22	1	1	3	3
Nursing staff	no. 2 354	2 237	419	(a) 375	323	311
Beds available	no. 2 299	2 240	1 030	950	843	724
In-patients—						
Total number treated	59 363	57 370	1 668	1 568	1 165	1 037
Daily average number of patients during year	1 538	1 558	846	803	679	698
In-patient costs—						
Total	\$'000 44 913	50 356	7 472	8 491	6 624	6 443
Daily average per patient	\$ 80	93	24	28	27	29

(a) Excludes nursing aids.

Hospitals for the Aged and Invalid

The State Government administers three hospitals caring for the aged and for invalids. In the table that follows, the distinction is made between 'general' and 'hospital' beds; 'general' refers to beds available for inmates not receiving treatment in the hospital sections of the institutions.

Government Hospitals for the Aged, 1976-77

Hospital	Average daily number of inmates			Beds available			Total persons accommodated during year	Total bed-days
	General	Hospital	Total	General	Hospital	Total		
Cosgrove Park (a)	110	131	241	136	149	285	404	87 996
St John's Park	175	259	434	279	296	575	776	158 548
Spencer Home for the Aged (b)	6	25	31	6	25	31	40	11 192
Total	291	415	706	421	470	891	1 220	257 736

(a) Cosgrove Park is administered as part of the Launceston General Hospital.

(b) This is a geriatric wing of the Wynyard Division of the North-Western General Hospital (previously the Spencer Hospital).

A new rehabilitation centre is presently under construction at New Town. This centre will cater for a wide range of services, including in-patient services for children and adults requiring hospitalisation because of all forms of disablement e.g. spastic diseases, mental retardation, crippled children and other handicapped persons and disabled persons generally. Domiciliary and day hospital therapeutic and home help facilities will still be based at St John's Park.

District Hospitals (Public)

These do not provide the diverse range of services available in the general hospitals, and do not have resident medical officers. They are located at Beaconsfield, Campbell Town, Currie, Franklin, Longford, New Norfolk, Ouse, Queenstown, Rosebery, St Helens, St Marys, Scottsdale, Smithton, Ulverstone and Whitemark.

Private Medical Establishments

There are 72 private medical establishments in Tasmania operated by charitable and church organisations and by private individuals or organisations. Most are concerned with care of the aged but five are hospitals with a more general purpose and one is a psychiatric hospital. All 72 are registered under Part III of the *State Hospitals Act* but six are also registered under the Federal *National Health Act* and *Health Insurance Act* as hospitals. These are Calvary, St Johns, St Helen's and Hobart Clinic in Hobart, and St Lukes and St Vincent's in Launceston; all provide medical and surgical services except Hobart Clinic. Forty-one of the remaining 66 establishments are licensed to provide nursing home care and 40 to provide accommodation for ambulant patients only.

The largest units in the non-hospital group are: Hobart Area, A.A. Lord Homes (111 beds), St Ann's Rest Home (113), Freemasons Home (126), Lillian Martin Home (112), Mary's Grange (90), Strathaven Lodge (97), Queen Victoria Home for the Aged (80); Launceston area, Nazareth House (99), Ainslie House (58); North-Western area, Meercroft Home for the Aged (96), Eliza Purton Home for the Aged (78).

State Health Laboratory

The State Health Laboratory is under the control of the Government Pathologist. Apart from providing certain pathological services to the Royal Hobart Hospital, other hospitals and to doctors, the laboratory provides special bacteriological and cytological services.

The Laboratory is located at the Royal Hobart Hospital; prior to 1965 special tests had to be done in Melbourne, but equipment installed in that year now enables all work to be done in Tasmania. Specimens from suspected T.B. sufferers, discovered in the compulsory chest X-ray program (which ended on 31 December 1976) used to be examined at the Laboratory; uterine and other cancers can be discovered by the Papanicolaou smear test. Tasmania was the first Australian State to introduce this test on a large scale; early diagnosis by this simple

and effective method, particularly in women who show no symptoms, usually makes possible the cure of this type of cancer.

Mass screening of new-born babies is done to correct errors of inborn metabolism, especially phenylketonuria, at the laboratory. Other work includes analysis of food, water and milk samples.

Government Analyst and Chemist Laboratory

This laboratory analyses a wide variety of foods, drugs and other substances and undertakes work for Government departments and the public. Its work includes food and agricultural chemistry, forensic chemistry and toxicology, analysis for industrial hygiene purposes, water and corrosion problems, and other matters such as blood alcohol examinations for *Road Safety (Alcohol and Drugs) Act* purposes.

Other Health Matters

Child Health Institutions

These are medical institutions run by the State or subsidised by public funds. They provide treatment and supervision along with general education. The Sight Saving School, School for the Blind and Deaf, Talire (for retarded children) and Wingfield (for orthopaedic patients) are government institutions for children with particular defects.

Ambulance Services

The Ambulance Commission of Tasmania co-ordinates services throughout the State and is responsible to the Minister for their effective operation. Ambulance Boards, centred on Hobart, Launceston, Devonport and Burnie, control services in the adjacent local government areas. A few municipalities, however, operate services outside the *Ambulance Act*. The total Government grant to ambulance services, both under Board and independent control, was \$1 552 303 in 1977-78.

Ambulance services under control of the four Boards provide free transport for ratepayers, occupiers and pensioners. In addition to receiving Government subsidies, their income is derived from fees (payable by visitors) and municipal grants.

The Ambulance Commission has adopted the training standards of the Victorian Ambulance Officer's Training School.

Royal Flying Doctor Service

This was established in Tasmania in 1960 and has as its purpose the provision of medical and dental services to persons in isolated areas. If the illness or injury is serious, a doctor flies to the patient and if necessary brings him back to hospital. The ambulance services receive the calls, make arrangements to charter aircraft and supply medical equipment. The Federal and State Governments make an annual grant towards operational expenses.

Blood Transfusion Service

Prior to 1954, the Australian Red Cross Society, which operates the service, was assisted only by the State Government; now a grant equal to 35 per cent of operating expenses is made by the Federal Government and a grant equal to 60 per cent of operating expenses by the State. The combined grant in 1977-78 was \$305 738.

Municipal Health Functions

Municipal councils and city corporations possess wide powers and responsibilities in public health. They organise triple antigen immunisation campaigns against diphtheria, whooping cough and tetanus, and vaccinations against poliomyelitis and smallpox. (These are available without charge to children under 17 years.) They control the condemnation of sub-standard dwellings, the disposal of sewage, the provision of garbage and night soil services and the reticulation of water. A medical officer of health, often appointed by two councils, is responsible, among other things, for: inquiring into the causes, origins and distribution of diseases; investigating influences affecting the public health of the district; directing and supervising the municipal health inspectors in the execution of the *Public Health Act*;

inspection of local certificates of notification of infectious disease and direction of control of such disease; reporting the existence of any nuisance; inspection of any animal carcass for sale for human consumption; and inspecting any premises where milk or milk products are produced or stored and for reporting on health of inmates or animals on the premises.

Federal Department of Health

General

The Department is concerned in Tasmania with the administration of the *Quarantine Act*, the *National Health Act*, the *Health Insurance Act* and the *Nursing Homes Assistance Act*; the control and maintenance of Pathology and National Acoustic Laboratories at Hobart and Launceston; and co-operating with the State Department of Health Services in the Community Health Program and related activities.

Quarantine

Quarantine guards against the importation from overseas of human, animal and plant infection. By arrangement, plant and animal quarantine is operated by the State Department of Agriculture. In general, interstate movements of animals and plants is left to the states, unless Federal action is necessary for the protection of a state.

Health Program Grants

These grants, under the *Health Insurance Act*, are generally paid to organisations providing services through medical and para-medical personnel remunerated on a salaried or sessional basis. An approved organisation is entitled to be paid an amount equal to the cost incurred by the organisation in providing the approved health service, including such part of the management expenses of the organisation as the Minister considers attributable to the provision of the health service

Domiciliary Nursing Care Benefit

This benefit of \$2 per day (\$14 per week) is designed to help meet the cost of home nursing and other professional care for aged people who are chronically ill but being cared for in their own homes. It is payable to any person who provides continuous care for a patient in a private home provided the home is the usual residence of both the person and the patient and provided the patient meets certain medical criteria. The main eligibility rules are: (i) patients must be 65 years of age or more; (ii) patients must have an official certificate from their doctor stating that because of infirmity or illness, disease, incapacity or disability they have a continuing need for nursing care by a registered nurse; and (iii) patients must be receiving care by a registered nurse on an approved basis.

Nursing Home Benefits

The *Nursing Homes Assistance Act* 1974 came into effect from 1 January 1975. Under this Act, religious and charitable nursing homes can elect to come under the provisions of that legislation which relates to 'deficit financing' of such nursing homes. These nursing homes submit a budget showing estimated operating receipts and payments and the estimated end of year deficit. The Federal Government provides monthly advances against the anticipated deficit and a final settlement based on the actual deficit revealed in the audited end of year accounts. The Act prescribes a fee to be charged to patients (\$49.25 per week with effect from 11 May 1978.) and this may be varied by legislation. Arrangements exist for waiver or part-waiver of the prescribed fee in certain circumstances.

Those religious and charitable nursing homes which have not elected to come under provisions of the *Nursing Homes Assistance Act*, together with private gain nursing homes and government nursing homes, continue under the provisions of the *National Health Act*.

The benefits and patient contribution to fees in these nursing homes are given in the following table:

**Nursing Home Benefit Rates (National Health Act)
(\$ Per Week)**

Particulars	Ordinary care patients	Intensive care patients
Basic benefit from 1 October 1977 (a)	103.95	145.95
Patient's share of fees from 11 May 1978	49.00	49.00
Total fee (b)	152.95	194.95

(a) Payable by the Federal Government for persons who *have not* taken out *both* medical and hospital private insurance, and by approved hospital benefits organisations for persons who *have* taken out private hospital insurance.

(b) 'Total fees' are the standard fees as determined by the Government at 11 May 1978. If fees actually charged are: (i) less than the standard fee, the basic benefit, shown above, is reduced by the difference; or (ii) greater than the standard fee, the patient's share, shown above, is increased by the difference.

Private gain nursing homes and those religious and charitable nursing homes, which have not elected to come under the provisions of the *Nursing Homes Assistance Act*, accept a fee control system and require departmental approval to vary their prescribed fees. The prescribed fees may differ between nursing homes because of the 'base' figure accepted for each nursing home when fees control was introduced on 1 January 1973 and because of continuing different costs as between such homes. An independent fees review committee exists in each state to determine any appeals made by nursing homes against departmental decisions on fees.

Pharmaceutical Benefits

The Pharmaceutical Benefits Scheme, under the provisions of the *National Health Act*, provides a comprehensive range of drugs and medicinal preparations which may be prescribed by registered medical practitioners for persons receiving medical treatment in Australia. Under this scheme, basic rate pensioners receive their pharmaceutical requirements free of charge; non-pensioner patients are required to pay a patient contribution fee of \$2.50 (reviewable) for each benefit item received. National Health prescriptions are valid for six months from the date they are written.

Pathology Laboratories

These laboratories, situated in Hobart and Launceston, provide diagnostic services for medical practitioners and hospitals. A general clinical pathology service is offered, and the laboratories also perform serological services for the Red Cross Blood Transfusion Centre.

National Acoustic Laboratory

National Acoustic Laboratory services, including the supply and maintenance of hearing aids and provision of batteries, are free to eligible persons. Those eligible for full services include persons under 21 years old, aged and invalid pensioners and their dependents, Repatriation and Service pensioners and War Widows, Social Security rehabilitees and Armed Services personnel. Referral, except in the case of children, must be by an appropriate medical practitioner.

Three main types of 'Calaid' hearing aids are provided by the Laboratory: in-the-ear, behind-the-ear and body aids. Each type is made in a number of ranges of power to suit differing degrees of deafness, and each has been designed to allow ready acoustic and electronic modification of performance characteristics. This enables selective fitting for virtually every type of hearing loss, using a selection procedure developed by the Laboratory. In addition to Calaid's a limited number of imported spectacle aids are utilised in those few cases where the particular acoustic qualities of these aids is required.

HEALTH INSURANCE

Up until 30 June 1975, health insurance in Australia was available only through registered private health insurance funds which provided various medical and hospital benefits schemes. Benefits paid to insured members of funds comprised a fund benefit, together with a Federal Government benefit. The Federal Government also provided benefits to pensioners and certain persons in needy circumstances (e.g. unemployed persons).

Introduction of Medibank

On 1 July 1975, 'Medibank', a new medical and hospital health insurance program for all Australians, came into operation.

The original Medibank scheme operated for 15 months. It provided automatic cover for everybody in Australia without the necessity to continue paying contributions to private medical and hospital insurance funds in order to qualify for the Medibank benefits. It provided benefits equal to at least 85 per cent of 'scheduled' medical fees, free accommodation and treatment in standard wards of recognised (i.e. public) hospitals, and a subsidy of \$16 per day to approved private hospitals in respect of each occupied bed. With the introduction of Medibank, private health insurance funds were permitted to continue to operate subject to approval under provisions of the *National Health Act*. Benefits offered were 'gap' insurance (the difference between the 85 per cent of Schedule fees paid by Medibank and 100 per cent of the Schedule fees) for medical, optometrical and hospital fees; a varied range of ancillary benefits not provided by Medibank; and supplementary hospital benefits to provide additional cover in respect of intermediate and private ward patients in recognised hospitals, and patients in private hospitals.

Changes to the Medibank Scheme

On 1 October 1976, new health insurance arrangements came into operation when the previous Medibank scheme was revised as a result of the recommendations of the Medibank Review Committee. Under the new arrangements all persons were required to make direct contributions for their health insurance cover, with special arrangements to exempt most pensioners and low income earners from payment.

Method of Payment

Under the new scheme, every person had the choice of paying either: (i) a levy of 2.5 per cent on taxable income, known as the health insurance levy (imposed from 1 October 1976), up to a ceiling amount set at \$300 per annum for families or \$150 per annum for single people, which provided 'Medibank Standard' cover; (ii) contributions to 'Medibank Private'; or (iii) contributions to a registered private health insurance organisation which provided benefits that were at least equivalent to those of Medibank Standard, in relation to medical benefits and benefits equal to the fees charged for the provision of hospital treatment in a recognised (i.e. public) hospital in respect of a private patient in other than a single room (i.e. \$40 per day as at July 1978). Thus, the principle of universal health insurance coverage was retained.

Certain Defence Force personnel and Repatriation beneficiaries and persons with a limited income were covered by Medibank Standard but were exempted from paying the levy.

Health Insurance Commission

Medibank is controlled by the Health Insurance Commission under the *Health Insurance Act 1973*. From 1 October 1976 the Commission operated two funds—Medibank Standard and Medibank Private.

Medical Benefits

Up to 30 June 1978, the basic medical benefit provided by Medibank and all registered medical benefits organisations was required to be 85 per cent of the approved Schedule fee for each service listed in the Medical Benefits Schedule, with a proviso that the maximum payment by the patient (where the Schedule fee was charged) be limited to \$5. As from 1 July 1978 the basic medical benefit was reduced to 75 per cent of the approved Schedule fee with the proviso that the maximum payment by the patient (where the Schedule fee was charged) be limited to \$10. The Schedule fee is the fee agreed on in negotiations between the Federal Government and the Australian Medical Association, or determined by an independent inquiry, as being the fair and reasonable fee for any particular service for medical benefits purposes, or determined by the Medical Benefits Advisory Committee.

Optometrical Benefits

As from 1 July 1978 the basic optometrical benefit was also reduced from 85 per cent to 75 per cent of the Schedule fee. The Schedule consisted of four items all of which were related to consultations given by optometrists. All participating optometrists gave an undertaking

that the fee charged for the specified consultations would not exceed the Schedule fee for that specified service.

Hospital Benefits

By arrangement between the Federal and Tasmanian Governments, all persons paying the health insurance levy (and their dependants) were entitled to accommodation and treatment in recognised (i.e. public) hospitals free of charge. Persons entering recognised hospitals as intermediate or private patients were charged, and the charges were recoverable from private health insurance organisations to the extent that adequate hospital insurance cover had been taken out.

Those persons who remained with Medibank Standard and paid the levy (or who by virtue of their income, were deemed to be levy payers without need to make actual contributions) could take out additional hospital insurance if they wished.

All persons entering private hospitals received a subsidy from Medibank of \$16 per day (payable direct to the hospital only) and could insure themselves for additional costs.

Benefits Additional to Basic Medibank

Additional health insurance was optional and could be obtained from any registered private health insurance organisation ('Medibank Private' was a registered 'private' health fund).

It was a condition of registration for private health funds that they offer basic private health insurance, providing the same medical benefits as Medibank Standard, and hospital benefits to cover the cost of shared room accommodation in a recognised (i.e. public) hospital (i.e. intermediate ward). These were required to be offered as a separate identifiable package.

Changes to Health Insurance Effective from 1 November 1978

Further changes to Australia's health insurance system were included in the 1978-79 Federal Budget introduced on 15 August 1978. These changes became effective from 1 November 1978. The main changes were:

- (i) The abolition of the health insurance levy and of the associated requirement for non-levy payers to take out private health insurance.
- (ii) The entitlement of all eligible residents to a basic medical benefit totally funded by the Commonwealth from general revenue. This benefit is the greater of:
(a) 40 per cent of the Schedule medical fee; and (b) the amount of the Schedule medical fee less \$20; per professional service.
- (iii) The Medibank Standard functions of the Health Insurance Commission were terminated.

These changes did not disturb previously existing arrangements whereby all eligible residents without hospital insurance cover are entitled to standard ward accommodation and treatment in public hospitals at no direct cost to themselves.

The following sections summarise provisions relating to medical benefits and to private health insurance funds.

Commonwealth Medical Benefit

The Federal Government undertook to pay a new universal Commonwealth medical benefit from Consolidated Revenue in respect of medical services rendered on or after 1 November 1978. This Commonwealth benefit covers 40 per cent of the Schedule fee for each medical service with a maximum patient payment of \$20 for any one service where the Schedule fee is charged. The Commonwealth benefit is payable to all Australian residents, whether privately insured or uninsured, with the exception of persons covered by Pensioner Health Benefits cards and persons identified as disadvantaged by medical practitioners (see below).

Pensioner Health Benefit Card Holders

Pensioners with Pensioner Health Benefit entitlements and the dependants of such pensioners continue to be eligible to receive medical benefits from the Government at 85 per

cent of the Schedule fee for each medical service. The maximum patient payment is \$5 for any one service where the Schedule fee is charged. The benefit is paid as a Commonwealth benefit.

The previously existing bulk-billing facility for these persons continues to be available. Claims for services after 1 November 1978 are to be processed by the Department of Health.

Bulk Billing for Disadvantaged Persons

Bulk billing arrangements are available in respect of persons identified by medical practitioners as disadvantaged. Medical practitioners may bulk-bill the Commonwealth for all services rendered to such persons (provided the patient is not privately insured) and receive 75 per cent of the Schedule fee for each service rendered. However, medical practitioners must accept the 75 per cent benefit as full payment for the service and will not be permitted to recover any further amount from such patients.

Private Health Insurance Funds

As a condition of registration, all private funds are now required to pay Commonwealth medical benefits on behalf of the Government. These benefits are:

- (i) the universal Commonwealth medical benefit (40%/\$20 maximum gap) payable to both uninsured and privately insured persons; and
- (ii) the Commonwealth benefit (85%/\$5 maximum gap) payable to persons covered by Pensioner Health Benefits entitlements where the doctor does not bulk-bill the Department of Health.

As a further condition of registration, each private fund is required to offer a basic medical benefits table which, together with the Commonwealth benefit, will cover 75 per cent of the Schedule fee for each medical service, with a maximum patient payment of \$10 for any one service where the Schedule fee is charged. This meant that any person who was privately insured for basic benefits up to 30 October 1978 and any levy payer who elected to take out private insurance from 1 November 1978 was able to retain his or her medical benefits cover at the same level as before.

As previously, private funds (including Medibank) may offer optional additional health insurance to take total cover up to a maximum benefit of 100 per cent of Schedule medical fees and the full cost of single room accommodation in a private hospital. Private health funds are also now permitted to offer optional 'deductibles' within their standard medical and hospital tables. (As an example, 'deductibles' could take the form of contributors paying the first \$100 of medical bills during a financial year themselves in return for lower contribution rates.) No funds operating within Tasmania were offering deductibles in December 1978.

HOSPITAL MORBIDITY

In the following tables particulars are given of all in-patients treated in Tasmanian public hospitals who left hospital during 1977. Patients still in hospital at the end of 1977 will be included in figures for the year in which they leave hospital. Normal maternity patients are included, but babies born in hospital are included only if they receive treatment in excess of that routinely provided for the new-born.

Treatment Statistics

The following table analyses patients by age group and length of stay in hospital:

Patients Treated in Public Hospitals: By Age Group and Average Length of Stay, 1977

Age group	Males			Females		
	Number	Per cent of total	Average length of stay (days)	Number	Per cent of total	Average length of stay (days)
Days—						
Under 28	446	1.96	8	375	1.24	10
28-365	783	3.44	7	569	1.88	8

Patients Treated in Public Hospitals: By Age Group and Average Length of Stay, 1977—continued

Age group	Males			Females		
	Number	Per cent of total	Average length of stay (days)	Number	Per cent of total	Average length of stay (days)
Years—						
1-4	1 542	6.77	4	1 024	3.39	4
5-9	1 287	5.65	5	927	3.07	4
10-14	979	4.30	5	985	3.26	5
15-19	1 468	6.44	7	2 896	9.59	6
20-24	1 342	5.89	7	4 523	14.97	6
25-29	1 154	5.06	7	4 215	13.95	7
30-34	1 022	4.49	8	2 449	8.11	7
35-39	934	4.10	8	1 449	4.80	7
40-44	918	4.03	8	1 040	3.44	8
45-49	1 055	4.63	9	1 097	3.63	9
50-54	1 495	6.56	11	1 287	4.26	10
55-59	1 536	6.74	12	1 225	4.06	10
60-64	1 734	7.61	13	1 169	3.87	13
65-69	1 680	7.37	14	1 343	4.45	14
70-74	1 445	6.34	16	1 185	3.92	17
75 and over	1 964	8.62	20	2 448	8.10	22
Total	22 784	100.00	10	30 206	100.00	9

Accidents were the main cause of hospitalisation of males in the 15-34 years age group. Injuries caused by accidents, poisoning and violence accounted for 2 094 male patients in the age group 15-34 years (42 per cent) but for only 686 female patients in this age group.

The next table analyses the patients shown in the previous table by condition treated and by length of stay:

Patients Treated in Public Hospitals: By Condition Treated and Average Length of Stay, 1977

Principal condition treated	Males			Females		
	Number of patients	Total days in hospital	Average stay (days)	Number of patients	Total days in hospital	Average stay (days)
Infective and parasitic diseases	697	4 896	7	714	4 079	6
Neoplasms	1 552	20 394	13	1 670	20 016	12
Endocrine, nutritional and metabolic diseases	356	4 579	13	501	7 024	14
Mental disorders	1 125	16 366	15	1 169	19 795	17
Diseases of the—						
Blood and blood forming organs	234	1 934	8	212	1 728	8
Nervous system and sense organs	1 081	10 928	10	1 008	10 716	11
Circulatory system	2 831	40 074	14	2 238	32 670	15
Respiratory system	2 493	18 425	7	1 708	10 437	6
Digestive system	2 179	18 630	9	1 982	17 123	9
Genito-urinary system	1 132	9 959	9	2 933	15 190	5
Skin and subcutaneous tissue	530	4 138	8	415	3 179	8
Musculoskeletal system and connective tissue	1 274	15 678	12	1 025	13 116	13
Congenital anomalies	354	2 911	8	252	2 395	10
Childbirth, complications of pregnancy and the puerperium (a)	—	—	—	8 488	59 201	7
Certain causes (b) of perinatal morbidity and mortality	341	3 971	12	337	4 379	13
Symptoms and ill-defined conditions	1 671	13 328	8	1 987	18 374	9
Accidents, poisoning and violence	4 372	38 451	9	2 392	25 919	11
Other special admissions or consultations	562	2 953	5	1 175	5 227	4
Total	22 784	227 615	10	30 206	270 568	9

(a) Includes supervision of normal pregnancy.

(b) Includes toxæmia of pregnancy, conditions of placenta, birth injury, etc.

Comparable treatment statistics (in total only) for 1976 were: (i) number of in-patients treated in public hospitals—males, 23 348 and females, 29 787; (ii) average stay in hospital—males, 11 days and females, 11 days; and (iii) total days in hospital—males, 250 813 and females, 322 162.

Examination of the above table reveals that the seeming imbalance between total male and total female patients is largely accounted for by one classification: 'Childbirth, complications of pregnancy and the puerperium'. When data under this classification is eliminated, total figures are as follows:

Patients Treated in Public Hospitals (a), 1977

Particulars	Males	Females
Number of patients	22 784	21 718
Total days in hospital	227 615	211 367

(a) Excluding the category 'Childbirth, complications of pregnancy and the puerperium'.

The most significant classification affecting males is 'Accidents, poisoning and violence', where males outnumber females nearly two to one. One factor is the greater exposure of males to industrial and road traffic accidents. For females, the most significant classification (not including 'Childbirth, complications of pregnancy and the puerperium') is 'Diseases of the genito-urinary system' where females outnumber males by more than five to two.

Further References

ABS Publications

Hospital Morbidity, Tasmania (4301.6) (annual, 1976 issue released 1-5-78, 77pp)

Mental Health Statistics, Tasmania (4302.6) (annual, 1975-76 released 24-10-78, 9pp)

Year Book Australia (1301.0) (annual, 1977-78 released in October 1978, 783pp)

Other Publications

DEPARTMENT OF HEALTH (Federal). *Annual Report of the Director-General of Health*. (Australian Government Publishing Service, Canberra.)

DEPARTMENT OF HEALTH SERVICES. *Report for the Year*. (Government Printer, Hobart.)

DEPARTMENT OF SOCIAL SECURITY. *Annual Report*. (AGPS, Canberra.)

DEPARTMENT OF SOCIAL WELFARE. *Report for the Year*. (Government Printer, Hobart.)

Chapter 16

LAW, ORDER AND PUBLIC SAFETY

LAW IN TASMANIA

Following British colonisation of Van Diemen's Land from 1803, a system of law and courts based on the Imperial system was established in the Colony. A description of the origin and evolution of Tasmanian law is included in the 1976 and earlier editions of the *Year Book*. This section describes the present system of law operating in the State.

The Criminal Law of Tasmania

In 1924 the *Criminal Code Act*, which codified and brought together the criminal law of Tasmania, was passed. This Act embodied the State's criminal law in the form of a code which was made a schedule to the 1924 legislation.

As a result of a review of the State's criminal law the *Criminal Code Act* 1973 was passed by Parliament. This statute embodied many important amendments to the Criminal Code; most of the changes stemmed from recommendations made by the Law Reform Committee of Tasmania. Among the more important changes were:

- (i) Repeal of the distinction between burglary and housebreaking. Prior to the 1973 Act the Criminal Code had perpetuated an archaic distinction between burglary which was committed at night and housebreaking which was committed by day.
- (ii) The more serious offence of aggravated burglary (i.e. where a person uses or carries a firearm or offensive weapon or uses force in the commission of a burglary) was incorporated in the code.
- (iii) A new offence of kidnapping was included.
- (iv) A section covering bomb threats was written into the legislation.
- (v) The infanticide provisions were extended to cover mothers of children up to 12 months of age.

Since passage of the *Criminal Code Act* 1973 further amendments have been made. The more important are as follows:

- (i) The provisions of the code relating to nuisance were revised and expanded to complement the *Environment Protection Act* 1973.
- (ii) The power of a judge to order whipping as a punishment for violent crimes was abolished.
- (iii) Section 124 was amended to make it a crime to have unlawful carnal knowledge of a girl under 17 years of age, i.e. the 'age of consent' was lowered from 18 years to 17 years. Consequently, amendments were also made to a number of other sections of the Code.

Juries

Tasmanian legislation regulating juries seems to have been first passed in 1830 although, for many years before that date, the introduction of the British system of trial by jury in civil and criminal cases had been persistently urged in the Colony. The *Hobart Town Gazette* shows that juries had been employed in the Colony for the trial of criminal cases from the

establishment of the Supreme Court in 1824. Juries remain as the tribunal for trying indictable criminal cases and there is limited right to a jury in civil actions, although in 1935 they were abolished for the purpose of trying motor accident cases.

Although the Tasmanian jury system was based on the English system it has, since 1934, embodied the principle of allowing *majority* decisions in certain circumstances instead of requiring the *unanimous* decisions once characteristic of jury usage in England and most other countries.

Civil cases have a seven-member jury and, if after three hours deliberation a seven-nil decision cannot be reached, a five-two decision is accepted. If the minimum five-two decision cannot be reached after four hours, the jury may be discharged.

In criminal cases, similar principles apply except that a 10-2 decision is accepted in lieu of 12-nil after stipulated periods of deliberation. In the case of murder, 12-nil is necessary to convict, but 10-2 can bring in a verdict of not guilty, or not guilty of murder but guilty of a lesser crime.

The Present Law Court System

Courts of Petty Sessions

For particular municipalities in the State, there is a Court of Petty Sessions. The Court is constituted by a magistrate (who must have been a legal practitioner or barrister for not less than five years) or by two or more lay justices. In major centres of population, a Court sits regularly and, in smaller centres, a Court sits less frequently or is convened as occasion requires.

A Court of Petty Sessions has jurisdiction over all summary offences and also over certain indictable offences at the option of the defendant. Under the *Justices Act 1959*, a defendant may choose summary trial in the Court of Petty Sessions when charged with the following crimes: (i) Escape or rescue; facilitating escape of a prisoner or harbouring an offender; assisting escape of a criminal lunatic; rescuing goods legally seized; making a false declaration (or statement). (ii) Stealing; killing an animal with intent to steal; unlawfully branding an animal; obtaining goods by false pretence; cheating; fraud in respect of payment for work; receiving stolen property. (In all these cases the value of the property concerned must exceed \$100 but not \$1 000. If the value does not exceed \$100 the defendant will be tried summarily. If it exceeds \$1 000 he will be committed for trial in the Supreme Court.) (iii) Breaking a building other than a dwelling-house. (It is necessary for the defendant to be committed to the Supreme Court for trial where it is alleged that in the commission of the offence: property to the value of more than \$1 000 has been stolen; violence has been used or offered to any person in or about the building; the person had in his possession a gun, pistol, dagger, cosh, or other offensive weapon; explosives were used; or the defendant intended to commit a crime other than stealing.) (iv) Forgery; uttering. (The complaint must be for an offence in respect of a cheque for not more than \$1 000.)

The following tables show the number of cases tried in the lower courts. (Minor traffic offences settled without court appearance are excluded.)

Cases Tried in Lower Courts

Offence	1973	1974	1975	1976	1977
Offence against—					
The person					
Males	1 198	1 319	1 082	869	704
Females	51	38	64	53	37
Property					
Males	4 513	4 989	4 500	4 274	4 489
Females	523	361	571	449	565
The currency					
Males	397	303	276	232	153
Females	266	80	78	129	101
Good order					
Males	2 835	3 412	3 810	2 839	2 329
Females	205	191	174	185	92
Traffic regulations					
Males	23 811	27 291	29 680	28 711	26 922
Females	1 611	1 884	2 353	2 782	3 127
All other offences (a)					
Males	8 610	7 188	8 210	7 789	5 854
Females	870	930	1 563	1 193	762
Total offences					
Males	41 364	44 502	47 558	44 714	40 451
Females	3 526	3 484	4 803	4 791	4 684

(a) Includes offences mainly related to liquor, education, neglected children, revenue, gambling suppression laws, desertion of wives and children, perjury and subornation, and conspiracy.

Lower Courts, 1977

Offence	Cases tried	Results of trials				
		Convictions	Committed to higher courts	Adjourned sine die	Dismissed or withdrawn (a)	Remanded
MALES						
Offences against—						
The person	704	413	113	59	104	15
Property	4 489	3 714	344	173	214	44
The currency	153	82	39	3	14	15
Good order	2 329	1 995	8	156	150	20
Traffic regulations	26 922	19 262	4	1 392	6 206	58
All other offences (b)	5 854	4 411	64	506	865	8
Total	40 451	29 877	572	2 289	7 553	160
FEMALES						
Offences against—						
The person	37	22	6	7	1	1
Property	565	355	161	11	37	1
The currency	101	52	47	—	2	—
Good order	92	85	1	2	4	—
Traffic regulations	3 127	1 776	—	106	1 245	—
All other offences (b)	762	542	5	47	168	—
Total	4 684	2 832	220	173	1 457	2
PERSONS						
Total	45 135	32 709	792	2 462	9 010	162

(a) 'Dismissed' is equivalent to 'not guilty' in higher courts.

(b) Includes offences mainly related to liquor, education, neglected children, revenue, gambling, desertion of wives and children, perjury and subornation, and conspiracy.

Courts of Request

These are constituted as courts with civil jurisdiction for particular municipalities in accordance with the authority given by the *Local Courts Act 1896*. Courts are held before a commissioner who is usually a magistrate. The Attorney-General fixes the dates on which these courts sit. Every Court has jurisdiction throughout the State but a plaintiff may lose costs if he brings his action in a Court other than the Court nearest to which the cause of action arose.

The jurisdiction of a Court of Requests, which is a court of record, covers all personal actions where the debt or damage claimed does not exceed the maximum amount fixed under the Act. Since 1 November 1966, the sum of \$1 500 has been fixed as the maximum jurisdiction for a Court of Requests in respect of a debt or liquidated sum, and \$1 000 in any other case.

The Commissioner alone determines all questions of fact as well as of law and his decision is the judgment of the Court, unless a jury is required. In any action either party may require a jury as of right and there is power for the Commissioner to order that an action be tried by a jury, even though neither party has required it. Law and equity are administered concurrently in the Court and the general principles or practice in the Supreme Court are adopted and applied in cases not expressly provided for in the Act or Rules.

Courts of General Sessions

Courts of General Sessions with civil jurisdiction are constituted under the *Local Courts Act 1896* for particular municipalities of the State. In Hobart and Launceston, civil actions are

dealt with by Courts of Requests. A Court of General Sessions is constituted by a chairman (elected by the justices for the municipality) and at least one other justice. All questions are decided by a majority of the justices present and, if they are equally divided in opinion, the chairman has both a deliberative and a casting vote. If there is business requiring its attention, the Court sits at times fixed by the Attorney-General.

A Court of General Sessions has jurisdiction to deal with civil proceedings of a minor nature and the limit of the Court's jurisdiction has been fixed at the sum of \$100.

The Supreme Court of Tasmania

The Supreme Court of Tasmania is constituted by the Chief Justice and five Puisne Judges. Regular sittings of the Court are held at Hobart, Launceston and Burnie, although the Court is empowered to sit and act at any time and at any place for the exercise of any part of the jurisdiction and business of the Court.

The Court has jurisdiction over all causes, both civil and criminal, except those reserved for the High Court of Australia under the Australian Constitution. It also exercises federal jurisdiction in matters such as bankruptcy, etc. Its civil jurisdiction extends to all causes of action, whatever the amount involved may be, and its criminal jurisdiction includes the trial of all indictable offences. In civil cases, the Court has power to call in the aid of one or more assessors specially qualified to assist in the trial of the actions, but it is not bound by the opinion or advice of any such assessor.

The following table shows the number of convictions, by offence, in the Supreme Court of Tasmania during 1975 and 1976. The 286 convictions during 1976 were the lowest number since 1968 when 243 convictions were recorded in the Supreme Court:

Supreme Court Convictions

Offences	1975		1976	
	Males	Females	Males	Females
Offences against the person—				
Murder	1	—	3	—
Attempted murder	2	—	—	—
Manslaughter—Other than while driving	1	—	1	—
While driving	—	—	1	—
Dangerous or negligent driving	25	1	24	2
Rape	13	—	3	—
Other unlawful carnal knowledge	13	1	13	—
Incest	1	—	2	—
Other offences against females	11	—	6	—
Indecent practices between males	6	—	4	—
Unnatural carnal knowledge	5	—	1	—
Robbery	14	1	15	—
Malicious wounding	5	—	4	—
Aggravated assault	1	—	1	—
Common assault	8	—	11	1
Other offences against the person	3	—	4	—
Offences against property—				
Burglary; break and enter; break, enter and steal	119	2	92	2
Receiving, including possession of stolen goods	15	1	10	1
Fraud and false pretences	15	1	10	1
Arson, n.e.i.	—	—	3	1
Stealing	46	4	28	—
Other offences against property	8	—	11	—
Forgery and offences against the currency	12	2	10	1
All other offences	9	1	16	4
Total (a)	333	14	273	13

- (a) There are fewer Supreme Court Cases tried than the number committed from the lower courts would lead one to expect. This is because: (i) *complaints* often embrace several *offences* in the lower courts; (ii) some cases are not proceeded with. Higher Court cases often proceed under different offence titles from those under which the lower court committals were made.

The following table shows the number of convictions in the higher courts over a five-year period:

Supreme Court Cases: Convictions

Offences	1972	1973	1974	1975	1976
Offences against—The person	105	134	140	112	96
Property	210	188	178	211	159
Forgery and offences against the currency	5	3	9	14	11
All other offences	4	15	27	10	20
Total	324	340	354	347	286

There is an appeal to the Supreme Court of Tasmania from all inferior courts and from many statutory tribunals.

Law and equity are administered concurrently in the Court which is enjoined to grant, either absolutely or on such terms and conditions as seem just, all such remedies to which any of the parties may be entitled so that, as far as possible, all matters in controversy between the parties may be completely and finally determined, and a multiplicity of legal proceedings avoided. The judges, on the recommendation of the Rules Committee, are empowered to make rules regulating the practice and procedure of all proceedings in the Court.

The jurisdiction of the Court is usually exercised by a judge of the Court and from his decision there is an appeal to the Full Court of the Supreme Court of Tasmania. A Full Court consists of three or more Judges of the Court. The Full Court is also a Court of Criminal Appeal under the Criminal Code. The latter is a Court to which appeals may be brought by the Crown or by an accused person where an indictable offence is involved. In some cases, there is an appeal as of right but, in other cases, special leave is required.

The High Court of Australia

This Court was created by the Constitution of the Commonwealth of Australia and it has both original and appellate jurisdiction. It is constituted by the Chief Justice of Australia and eight other Justices.

There is an appeal as of right to the High Court from the Supreme Court of the State in any civil matter where the sum involved amounts to at least \$3 000 or where the decision under appeal affects the status of any person under the laws relating to aliens, marriage, divorce, bankruptcy or insolvency. In other cases (including criminal cases) there is an appeal to the High Court if leave or special leave is granted.

Sittings of the High Court of Australia may be held in each capital city. Provision is made, when there is insufficient business to warrant convening a sitting of the Court in Hobart, for Tasmanian cases to be heard either in Melbourne or Sydney.

The Federal Court of Australia

The Court created by the *Federal Court of Australia Act 1976*, is constituted by the Chief Judge and 20 other judges. It exercises original, and in some cases appellate jurisdiction under the *Conciliation and Arbitration Act 1904*, the *Bankruptcy Act 1966* and the *Trade Practices Act 1974*. Sittings of the Federal Court of Australia are held in each capital city and its District Registrars are in most cases the Registrar in Bankruptcy for each state.

Tribunals

There are many tribunals which are not true courts and the powers and functions of these depend upon the detailed provisions of the particular statute under which they operate. Certain specialised courts have been created by statute. For example, the Wardens' Court is constituted under the *Mining Act 1929*.

Coroners' Courts

Coroners are appointed by the Governor and have jurisdiction throughout the State. Under the *Coroners Act 1957*, a coroner may hold an inquest: (i) Concerning the manner of death of any person who has died a violent or unnatural death, who died suddenly without the

cause being known, or who died in a prison, or mental institution; at the direction of the Attorney-General, he may also be required to hold an inquest concerning any death. (ii) Concerning the cause of any fire if the Attorney-General has directed, or has approved a request by the owner or insurer of the property; or at the request of the State Fire Authority or the Rural Fires Board.

The coroner usually acts alone in holding an inquest, but either the Attorney-General or the relatives of the deceased may request that a four or six-man jury be empanelled. After considering a post-mortem report the coroner may dispense with an inquest, unless the circumstances of death make an inquest mandatory under the Act.

The duty of the Court is to determine who the deceased was, and the circumstances by which he came to his death. Medical practitioners and other persons may be summoned to give evidence. In the case of the death of an infant in a nursing home, the coroner may also inquire generally into the conditions and running of the institution. On the evidence submitted at the inquest, the coroner can order a person to be committed to the Supreme Court and can grant bail. In the case of murder, a coroner can issue a warrant for apprehension.

Children's Courts

A 'child' in this jurisdiction is one under the age of 17 years. The Court before finally disposing of the case, must receive a report from a child welfare officer (the representative of the Director of Social Welfare), unless the Court considers the offence trivial or the Director decides not to provide one. A child's parent has the right to be heard and to examine and cross-examine witnesses, or to be represented by counsel; also a parent can be compelled to attend the hearing if this imposes no unreasonable inconvenience.

In summary proceedings, the Court is compelled not to enter a conviction against a child unless it imposes a sentence of imprisonment or there are special circumstances which indicate that a conviction should be recorded.

Children under 16 years cannot be sentenced to imprisonment and children of 16 years cannot be sentenced for more than two years, in aggregate. Minimum penalties imposed by statute do not apply to children; for those under 14 years the maximum fine is \$20, and for those over 14 years, \$50. The Court may impose a supervision order to bring the child under the guidance of a child welfare officer or, if over 15 years, of a probation officer. Alternatively, the Court may declare the child a ward of the State, placing him under the control of the Director of Social Welfare until his eighteenth birthday, unless released sooner; it may also direct that a ward be committed to an institution. In cases where further investigation appears necessary the Court may issue a remand for an observation order before it makes a final decision. Remands for observation orders are for short periods and usually provide for intensive supervision. (In the case of delinquency the maximum period for such an order is three months.)

Neglected or uncontrolled children are in the Court's jurisdiction; it may make a supervision order; an interim order (similar to a remand for observation order, the effect being to defer the transfer of guardianship until it is apparent that there is no suitable alternative); or impose wardship or bind the parents over to provide proper care and control, and comply with other directions. If parents have contributed to a child's offence, by failing to control the child, they may also be charged, convicted, fined, ordered to pay for damage and obliged to enter into a recognizance for the good behaviour of the child for up to 12 months.

Unlike a Children's Court the Supreme Court is in no way inhibited in imposing a penalty on a child. In addition to its ordinary sentencing powers, it may make supervision or wardship orders, and commit a child to an institution. If a child is sentenced to imprisonment, the responsible Minister may direct that the sentence be served in a place other than a gaol.

Statistics showing numbers of children appearing before Children's Courts by age, sex and alleged offence are given in the next two tables:

Children Appearing Before Children's Courts (a), 1976-77
Classified by Age and Sex

Sex	Age (b) (in years)										Total (c)
	Under 8	8	9	10	11	12	13	14	15	16	
Boys	29	5	9	24	55	97	144	319	593	1 143	2 507
Girls	14	1	—	2	3	8	43	71	91	221	471
Total	43	6	9	26	58	105	187	390	684	1 364	2 978

(a) A child appearing twice or more before the Courts will appear twice or more in the table.

(b) Ages are at time of court hearing, not at time of offence.

(c) Includes 106 children (89 boys and 17 girls) who were 17 years old when appearing before the Courts but 16 at the time the alleged offences were committed.

Children Appearing Before Children's Courts (a)
Classified by Offence

Offence alleged	1972-73	1973-74	1974-75	1975-76	1976-77
Damage to property	114	117	153	153	167
Breaking, entering and stealing	379	355	385	354	325
Stealing	431	433	578	586	616
Receiving	27	16	35	21	26
Illegal use of vehicles	235	209	285	224	292
Offences involving fraud	17	12	8	10	5
Sex offences	24	27	18	30	15
Other offences against the person	43	93	129	60	52
Offences against decency	51	49	6	15	10
Relatively serious offences	1 321	1 311	1 597	1 453	1 508
Disorderly conduct	89	65	126	77	81
Traffic offences	339	481	661	710	634
Breaches of—Licensing laws	440	689	591	509	474
By-Laws	12	4	12	11	2
Firearms offences	18	36	19	28	9
Gaming	45	80	49	31	8
Trespass	26	18	57	49	27
Other	10	93	170	157	95
Other offences	979	1 466	1 685	1 572	1 330
Appearing as—Uncontrolled	33	122	48	53	32
Neglected	80	196	332	90	100
Breaches of supervision	11	12	28	9	8
Complaints under Child Welfare Act	124	330	408	152	140
Total	2 424	3 107	3 690	3 177	2 978

(a) A child appearing twice or more will appear twice or more in the table.

In the preceding table, the figures relate to actual prosecutions. Where a report concerned multiple offences, the apparently more serious one has been listed. However, a child may be included more than once if more than one report has been made.

The following table shows the number of children found guilty of an offence or against whom a complaint has been proven. The basis for inclusion is different from that in the two earlier tables:

- (i) a child found guilty at two or more appearances is only counted once; and
- (ii) a child found guilty of more than one offence is classified under the more serious.

Individual (a) Children: Findings of Guilty, or Complaint Proven, 1976-77

Sex	Relatively serious offences (b)	Other offences (b)	Complaints under Child Welfare Act (b)	Total
Boys	584	679	29	1 292
Girls	92	141	37	270
Total	676	820	66	1 562

(a) See paragraph before table for definition of 'individual'.

(b) See previous table for classification of offences and complaints.

Bankruptcy

The *Bankruptcy Amendment Act 1976* abolished the former Federal Court of Bankruptcy and vested its jurisdiction in the Federal Court of Australia which was established under the provisions of the *Federal Court of Australia Act 1976*. The Federal Court of Australia generally exercises bankruptcy jurisdiction in N.S.W., the A.C.T. and Victoria while the Supreme Court of Tasmania exercises the jurisdiction in Tasmania.

Under the *Federal Bankruptcy Act 1966*, a person unable to meet his debts may voluntarily present to the Registrar in Bankruptcy a petition against himself and become a bankrupt under section 55; if the Registrar does not accept the petition and refers it to the Court, he may be directed to accept it. A creditor may apply to the Court for compulsory sequestration of a debtor's estate where the debt is not less than \$500. Where a debtor becomes bankrupt:

- (i) His property, not being after-acquired property, vests immediately in the Official Receiver in Bankruptcy; and
- (ii) his after-acquired property vests in the Official Receiver in Bankruptcy, or if a private trustee has subsequently been appointed, then in that trustee.

A debtor may avoid sequestration in some circumstances, by authorising a registered trustee to call a meeting of his creditors and take control of his property; or by authorising a solicitor to call a meeting of his creditors (Part X). The debtor's property is controlled by the trustee until the creditors resolve otherwise, or the Court orders otherwise, or a deed of assignment or arrangement is executed, or a composition is accepted, or the debtor dies or becomes bankrupt.

A person becoming bankrupt under the Act may be automatically discharged from bankruptcy after the expiration of five years (section 149) unless discharged earlier by the Court. The Registrar, trustee or a creditor may lodge an objection to this type of discharge, and if it is not withdrawn the debtor must apply to the Court under section 150 if he desires to be discharged.

The following table shows the number of bankruptcies and private arrangements together with the assets and liabilities of debtors:

Tasmania: Bankruptcy Proceedings

Particulars	1973-74	1974-75	1975-76	1976-77	1977-78
Bankruptcies and orders for administration of deceased debtors' estates—					
Number	69	75	94	97	148
Liabilities	660	636	1 158	931	1 607
Assets	154	280	451	361	541
Deeds of assignment, arrangement, compositions and schemes—					
Number	12	6	4	5	8
Liabilities	311	129	171	586	386
Assets	315	176	132	336	304
Total—					
Number	81	81	98	102	156
Liabilities	971	765	1 329	1 517	1 993
Assets	469	456	583	697	845

The Licensing Board

The State Licensing Board was set up under the *Licensing Act 1976* and consists of a Barrister (who is the Chairman) and two other members. The Board is empowered to hear and determine applications for 'general', 'on', 'off', 'club' and 'limited' licences. The Board may prescribe standard conditions as the basis on which licences are granted, with respect to different types of establishment.

The following table shows the total hotel bedroom accommodation available to the public during recent years:

Standard of Accommodation: Hotels

At 30 June	Total number of bedrooms	Number of bedrooms furnished with—	
		Private bath, shower, toilet and hand-basin	Handbasin with hot and cold running water
1972.....	3 640	1 333	1 924
1973.....	3 928	1 751	1 797
1974.....	4 089	1 899	1 812
1975.....	3 836	1 899	1 450
1976.....	3 962	2 082	1 606
1977.....	3 950	2 150	1 530

The Board's inspectors and public health inspectors make a thorough examination of each hotel prior to the annual sittings at which renewals of licences are considered. Reports are furnished for the information of the Board and the Tourist Department. An officer of the Fire Brigades Commission also carries out an annual inspection to ensure that each hotel complies with the requirements of the Commission.

The following table shows the number of operative licences and club registrations:

Licensed Hotels, Restaurants, Clubs and Wholesalers

At 30 June	Hotels (a)	Restaurants (b)	Clubs	Wholesale licences	Total
1971.....	269	23	153	29	474
1972.....	269	22	156	29	476
1973.....	269	27	162	31	489
1974.....	274	42	164	45	525
1975.....	273	52	167	45	537
1976.....	271	60	169	48	548
1977.....	274	64	180	52	570

(a) Includes a small number of premises not providing accommodation and known as 'taverns'.

(b) Includes motels which have a licence for dining rooms only.

The Ogilvie ministry introduced 10 a.m. to 10 p.m. bar trading hours before World War II and, in the post-war period, Tasmania's 10 p.m. closing contrasted with 6 p.m. closing in S.A., Victoria and N.S.W. However, these States progressively liberalised their drinking laws, and by 1967 all had adopted late closing.

In 1967 the Tasmanian *Licensing Act 1932* was amended to allow 11.30 p.m. closing on Friday and Saturday nights for those hotels which desired to observe these hours and which obtained the necessary permits; 10 p.m. closing was made the rule for other nights (excluding Sunday) with provision nevertheless to obtain extension permits for special functions. The permitted age for drinking on licenced premises was lowered from 21 to 20 years and lowered further to 18 years in 1973. Restaurants complying with defined conditions can obtain licences to sell liquor and licenced restaurants can open until 11.30 p.m. six nights a week. Dining accommodation, kitchen specifications, etc., for licenced restaurants are strictly supervised.

The Wrest Point Casino Licence (granted by the Treasurer) permits certain categories of gaming until 3 a.m. seven days per week. The *Licensing Act 1976* makes provision for the

issue of a casino permit authorising liquor to be sold or supplied for consumption within the Casino. This permit applies only in respect of times when the Casino is open for gaming during the prescribed hours. Other permits are: (i) *occasional permits* for genuine clubs and associations which wish to hold functions; and (ii) *public event permits* which authorize the sale of liquor at public entertainment (e.g. football matches).

The *Licensing (Trading Hours) Act 1975* amended the *Licensing Act 1932* and allowed all hotels, restaurants and licensed clubs to set their own trading hours provided they traded for at least eight hours a day on five days of the week with Sunday trade limited to between noon and 8 p.m. The legislation, which adopted most of the Savas Committee of Inquiry recommendations on liquor licensing, came into operation at the same time as revised drink-driving laws. Sunday trading under the new law commenced on 21 December 1975.

PRISONS

General

The establishment, regulation and conduct of prisons and the custody of prisoners in Tasmania are provided for under the *Prison Act 1977* which repealed the *Prison Acts 1868* and *1908*. Provision is made for the appointment, by the Governor, of a Controller of Prisons who is responsible for the supervision of prisons, including the initiation and implementation of correctional programs for prisoners and staff training schemes.

Each year, two appointments are made to the position of Official Visitor to each institution. They visit the prison at least once per month to examine the treatment, behaviour and condition of prisoners, and the condition of the prison.

The main prison in Tasmania is at Risdon near Hobart, which has, as an outstation the Gaol Farm at Hayes in the Derwent Valley. The Launceston Prison functions as a holding centre for prisoners from the northern districts of the State prior to their transfer to Risdon.

The following table shows Prisons Department expenditure from Consolidated Revenue:

Prisons Department: Expenditure From Consolidated Revenue
(\$'000)

Particulars	1973-74	1974-75	1975-76	1976-77	1977-78
Total expenditure	1 481	2 089	2 326	2 753	3 184
Net receipts (a)	84	70	85	73	86
Net expenditure	1 397	2 019	2 240	2 680	3 098

(a) From prison industry and gaol farm activities described later in the text.

Capital Punishment

The death sentence has not been carried out in Tasmania since 1946, but judges pronounced the sentence from time to time until 1968; in October 1968, the Attorney-General introduced a bill to abolish capital punishment and this was passed by the Parliament in December of that year.

Prisoners Received and Discharged

In the following table giving details of prisoners received into and discharged from Tasmanian prisons, no distinction is made between those on remand and those convicted and sentenced to imprisonment. (Figures for H.M. Prison, Risdon, include those held in custody at the Hayes Gaol Farm.)

Prisoners Received and Discharged (a), 1976-77

Particulars	Risdon Gaol		Launceston Gaol		Total	
	Males	Females	Males	Females	Males	Females
In custody at 30/6/1976	290	4	3	—	293	4
1976-77—						
Received	488	32	492	13	980	45
Transferred (b)	+324	+9	—324	—9	—	—
Discharged	840	43	168	4	1 008	47
In custody at 30/6/1977	262	2	3	—	265	2

(a) Includes persons on remand.

(b) Transfers from Launceston to Risdon.

Prisoners' Offences

The following table shows the offences for which convicted prisoners were received:

Offences (a) for Which Convicted Prisoners Were Received in the State During 1976-77

Offence for which convicted	Males	Females	Persons	
			Number	Proportion of total
Offences against the person—				
Common assault	64	2	66	3.75
Assault police	15	—	15	0.85
Indecent assault	8	—	8	0.45
Other	31	—	31	1.76
Total	118	2	120	6.82
Offences against property—				
Stealing	368	30	398	22.63
Burglary and breaking offences	307	4	311	17.68
Steal a motor vehicle	131	2	133	7.56
Damage to property	47	—	47	2.67
Obtain goods by false pretences	89	19	108	6.14
Forgery, uttering and currency offences	56	2	58	3.30
Other	18	1	19	1.08
Total	1 016	58	1 074	61.06
Offences against good order—				
Drunkenness	45	3	48	2.73
Escape from lawful custody	7	—	7	0.40
Resist arrest	19	—	19	1.08
Indecent or threatening language	22	—	22	1.25
Fail to pay fines and costs or default	18	—	18	1.02
Other	96	1	97	5.51
Total	207	4	211	12.00
Traffic offences—				
Drive whilst licence suspended	207	3	210	11.94
Dangerous driving	18	—	18	1.02
Exceed .08 per cent.	57	—	57	3.24
Drunken driving	15	—	15	0.85
Other	25	—	25	1.42
Total	322	3	325	18.48
Offences against the Dangerous Drugs Act	27	2	29	1.65
Grand Total	1 690	69	1 759	100.00

(a) The number of offences exceeds the number of prisoners received since some prisoners were convicted of multiple offences.

The next table classifies convicted prisoners according to the number of their previous convictions:

Convicted Prisoners Received in the State During 1976-77, According to Number of Previous Convictions (a)

Prisoners	Number of previous convictions				Total
	Nil	One	Two	Three or more	
Number received	38	23	21	479	561
Percentage of total	6.8	4.1	3.7	85.4	100.0

(a) Previous convictions may not necessarily have involved imprisonment.

Age of Prisoners

Young offenders account for a high proportion of receptions. The proportion of convicted male prisoners under 25 years was: 62 per cent in 1972-73; 62 per cent in 1973-74; 61 per cent in 1974-75; 58 per cent in 1975-76; and 59 per cent in 1976-77. The following table shows the age of convicted prisoners admitted to gaol:

Ages of Convicted Prisoners Received in the State, 1976-77

Sex	Age group (in years)								Total
	16-17	18-19	20-24	25-29	30-39	40-49	50-59	60 and over	
Males	51	104	164	69	59	44	43	7	541
Females	3	3	6	1	1	-	6	-	20
Total	54	107	170	70	60	44	49	7	561

Parole and Remission of Sentences

Good conduct remissions of up to one third of sentence for prisoners sentenced to over three months may be granted by the Governor of the State on the Controller of Prisons' recommendation. Prisoners may also be paroled on licence for the balance of their sentences.

On 31 March 1976, the *Parole Act 1975* was brought into effect by proclamation. This Act repealed the *Indeterminate Sentences Act* and provided machinery for the appointment of a three-member board to deal with the granting of parole. This function was previously carried out by the State Governor on recommendations made by the Controller of Prisons.

Risdon Gaol

The Risdon Gaol, with provision for 333 prisoners, was opened in November 1960. Male prisoners were then transferred from the old Hobart Gaol and, in June 1963, the Female Prison, the first entirely separate gaol for women to be built in the State, was opened on the Risdon site. The following table shows the daily average and highest number of prisoners at Risdon Gaol over a five-year period:

Number of Prisoners, Risdon Gaol (a)

Prisoners	1972-73	1973-74	1974-75	1975-76	1976-77
Maximum number	398	388	366	365	301
Daily average	371	344	342	309	263

(a) Includes Hayes Gaol Farm.

The Risdon Gaol incorporates workshops which serve as a basis for vocational and trade training in such subjects as woodworking, tailoring, sheet metal working, laundry and breadmaking. Educational services include instruction during working hours for illiterate and semi-literate prisoners; private study during evenings in general academic subjects to Secondary Schools Certificate standard; correspondence courses in University, School Certificate, Higher School Certificate and various technical and commercial subjects; tuition in English for migrants; and training in art and allied subjects. A classification committee interviews all prisoners on admission and decides on each individual's training programme.

Groups meet regularly for wood carving, art, pottery, toy making and chess. Feature and documentary films are screened fortnightly. The Prison Debating Society debates regularly against outside teams. The Education Section publishes a prison magazine periodically. A comprehensive sports programme is conducted including athletics, gymnastics and competitions in cricket, volley ball, basketball and football.

The State Library of Tasmania helps with the prison library, providing a generous supply of books on a rotational basis, to supplement the stock of books owned by the Department. Over 5 000 volumes are immediately available for selection and prisoners may order books of

special interest from the State Library System. The prison library has recently been re-located to develop the library atmosphere. Some 1 100 books are borrowed weekly from the library all records being kept by prisoner librarians who receive advice from State Library officers.

Prison industries produce articles for government departments and institutions. The following table shows the receipts for prison industries over a five-year period. A laundry installed in 1963 contributes to receipts from sales and services but the amounts are not a true indication of value to the Government, as laundry and other services are provided at a nominal figure for hospitals and other government institutions.

Gaol Suspense Account (Prison Industries)
(£)

Particulars	1972-73	1973-74	1974-75	1975-76	1976-77	1977-78
Receipts (a)	143 783	145 045	184 672	192 132	216 978	247 946
Paid to Consolidated Revenue	50 209	40 850	35 329	27 834	23 076	30 632

(a) Maintenance and material charges are met from receipts, the balance being paid to Consolidated Revenue in the following year.

Hayes Gaol Farm

The Gaol Farm at Hayes ('Kilderry') is an outstation of the Risdon Prison. It is used to prepare men for a normal way of life through operation of the honour system. Up to 90 prisoners who are regarded as being worthy of trust, regardless of their age, length of sentence or type of offence, are held there.

The following table shows the receipts from sale of farm produce and the amounts paid to Consolidated Revenue over a five-year period:

Gaol Farm Suspense Account
(£)

Particulars	1972-73	1973-74	1974-75	1975-76	1976-77	1977-78
Receipts (a)	131 440	170 302	174 506	197 173	212 508	224 859
Paid to Consolidated Revenue	24 612	42 671	34 504	57 623	50 027	55 042

(a) Maintenance and material charges are met from receipts, the balance being paid to Consolidated Revenue in the following year.

The 567-hectare property has been developed into a model farm with a great diversity of farming activities. These include approximately 26 hectares for vegetables; a registered stud of friesian cattle and herefords; about 2 000 sheep for wool and fat lambs; a registered herd of berkshire pigs; poultry; cropping of wheat, oats, lucerne and hay; breeding of children's ponies and hot house cultivation. In May 1969, 125 hectares of land was purchased near New Norfolk. This property, about two kilometres north of the Hayes prison farm functions as an annexe to the Hayes property. During 1970-71 a sawmill was established on the property. A further 100 hectares adjacent to this property was purchased during 1974-75. The Royal Derwent Hospital farm of 297 hectares, including the dairy herd and poultry section, was transferred to the Prisons Department during 1971. Whole milk is produced and sold in bulk for general use. Building construction activities and machinery maintenance workshops also provide employment, but this range of prison industries is more limited than at Risdon. Similar educational and recreational facilities to those at Risdon are provided.

The Probation and Parole Service

The Service is a division of the Attorney-General's Department and comprises a total of 42 Probation and Parole Officers, including the Chief Probation and Parole Officer. The Service's head office is located in Hobart and there are district offices at Launceston and Burnie with branch offices at Bellerive, Devonport, George Town, Glenorchy, New Norfolk, Queenstown and Ulverstone.

The main function of the Service is to provide supervision of persons released from the courts on probation and those released from prison on probation or parole. Counselling in respect of personal and family matters is offered, as is practical assistance aimed at providing suitable employment and accommodation. Social re-orientation discussion groups for those under supervision are held regularly, and remedial teaching classes are also a feature of the Service. The Service also administers the community Work Order Scheme which is designed to provide a method of treatment of offenders as an alternative to imprisonment.

THE TASMANIA POLICE

Organisation

The Police Department is headed by the Commissioner of Police who is responsible to the Minister for Police. The Commissioner is assisted by a Deputy Commissioner and two Assistant Commissioners. The highest uniform rank in the Force is that of Chief Superintendent.

The State is divided into four geographical districts with headquarters at Hobart, Glenorchy, Launceston and Burnie. The Force also has four specialist branches: Recruitment and Training; Criminal Investigation; Traffic; and Management Services. Each district and branch is under the control of a Superintendent.

General Policing

General policing is performed by uniform personnel who maintain beat patrols on foot and in conjunction with vehicular patrols. Beat police are equipped with radios and are in constant touch with their bases.

Recruitment and Training

Two induction schemes operate (one for adults and another for Cadets): (i) adult courses are of 20 weeks duration for persons who have attained the age of 19 years; and (ii) Cadet courses are run for youths aged from 16 to 18 years and are of two years duration. Regular in-service courses are conducted for personnel drawn from all ranks and all parts of the State. The Rokeby Academy has administrative, classroom and residential blocks, together with a pistol range, parade ground, library, lecture-theatre, gymnasium and driver training complex. Single-room accommodation is available for 120 students. Classrooms are equipped with audio-visual educational devices, including closed-circuit television.

Criminal Investigation

While all personnel in the Force have a responsibility towards crime detection the Criminal Investigation Branch personnel specialise in this field—members are divided into specialised sections, including the Drug Bureau and Gaming Squad.

Traffic Control

The Traffic Control Branch is responsible for enforcing regulations for the Transport Commission and deploys personnel in cars and on motor cycles. It makes use of sophisticated mechanical and electronic devices.

Management Services

All support services including the Information Bureau, Scientific Bureau, Planning and Research, Search and Rescue, Transport and Communications Sections are part of the Management Services Branch.

The Information Bureau maintains a record of previous convictions, property tracing, *modus operandi* of crimes, missing persons and warrants issued as well as statistics on crimes and offences reported and cleared.

The Scientific Bureau provides specialist services in the fields of: (i) Fingerprinting. It has on file approximately 100 000 fingerprint sets. Close liaison is maintained with interstate and overseas sources as well as with the Central Fingerprint Bureau in Sydney. (ii) Photography. Duties involve attendance at the scene of major crimes and serious road accidents. Photogrammetric plans are produced. (iii) Ballistic examinations are provided, together with the maintenance of a ballistics library. (iv) Documents and drawing. Activities include examination of forged documents and use of 'Photo-fit' equipment to aid in the identification of offenders.

The Planning and Research Section is responsible for studying and improving existing work procedures and making recommendations on planning for future development.

A well equipped Search and Rescue Squad is based at Hobart and is augmented by part-time members from other sections of the Force. Duties include rescues from the bush, mountains, cliffs, caves, at sea and underwater. Valuable support is received from walking, climbing and boating organisations. A powerful motor launch, *Vigilant*, with a sea range of 1 300 kilometres is located at Hobart. Smaller craft are stationed at points around the State coastline and at inland waterways.

The mobility of the Force is provided by a fleet of 400 vehicles, including motor cycles, caravans and mobile headquarters.

Radio and telex systems operate both intrastate and interstate. Radio is installed in most cars, boats and motor cycles giving a statewide coverage.

Division of Road Safety

The Division is headed by the Director of Road Safety. It is principally concerned with the development and implementation of Government road safety policy and legislation. It complements facilities available through other departments, authorities, private enterprise and voluntary organisations to ensure that available resources are fully used and co-ordinated.

A school road safety education programme is operated throughout the State. Nine mobile Road Safety Officers are employed and supervise 53 part-time Adult Crossing Guards. In addition to school education, the Division is responsible for the preparation and dissemination of general road safety publicity material. Statistics concerning road crashes are used in assessing the value of instituted policies and in the development and initiation of new schemes to promote road safety throughout Tasmania.

Strength of Force

The following table shows the number of police and expenditure:

Tasmania Police: Number and Cost

Particulars	1973-74	1974-75	1975-76	1976-77	1977-78
Police officers (a) no.	939	976	1 004	1 026	1 030
Persons per police officer(a) no.	r 425	415	406	r 400	402
Cost (total expenditure of Police Department) \$'000	9 118	13 738	16 053	19 025	20 979
Cost per head of mean population \$	r 22.95	r 34.17	39.52	46.50	50.91

(a) At 30 June.

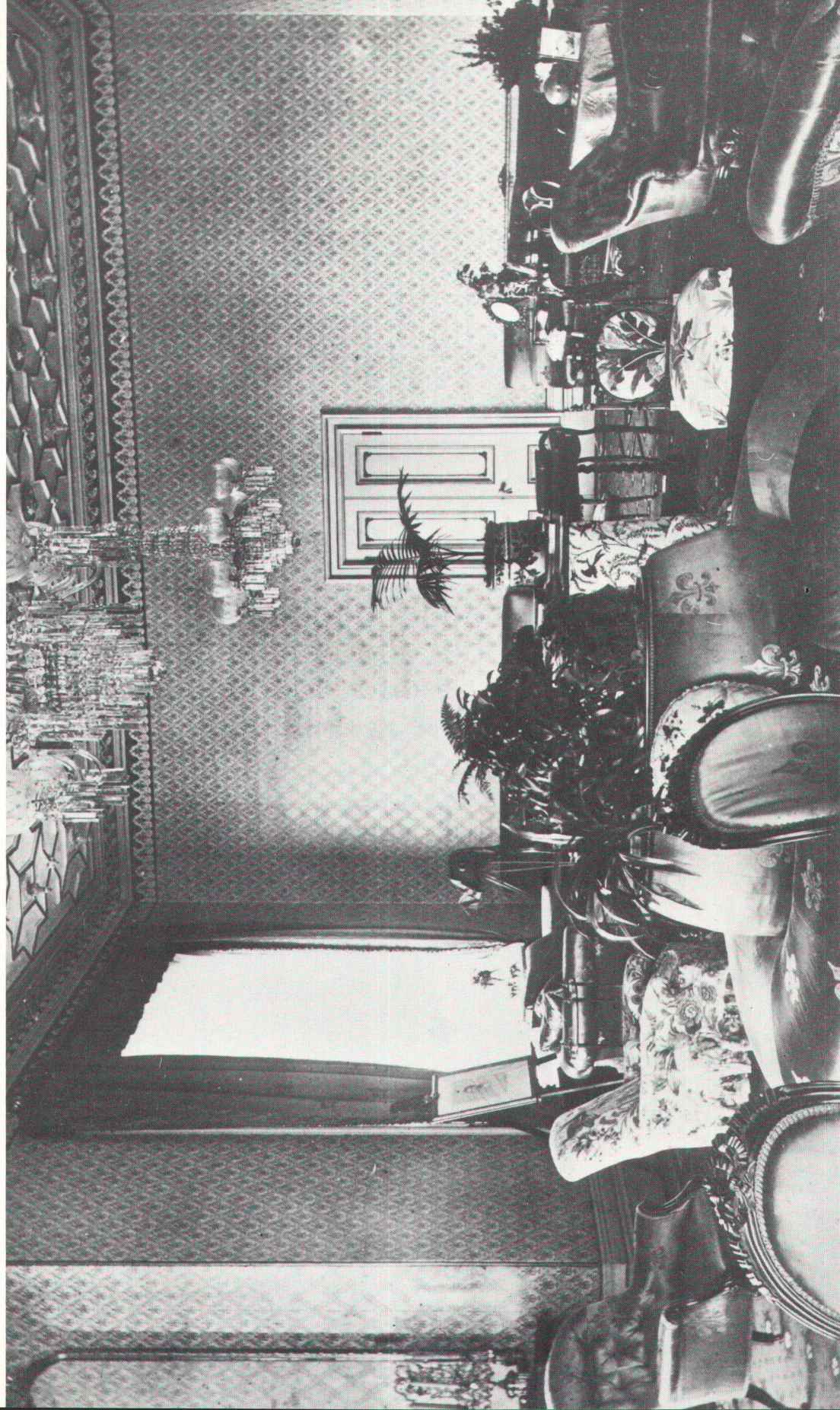
EMERGENCY SERVICES

State Emergency Service

Following a series of discussions at federal and state levels the Tasmanian Government, in 1962, decided, in common with other states, to establish a Civil Defence and Emergency Services Organisation for Tasmania. The Government considered that in addition to its intended role in time of war the organisation should be organised and trained to assist in combating natural emergency situations. A Director of Civil Defence and Emergency Services was appointed to plan the new organisation and exercise overall control of volunteer units. In April 1975 the title was changed to State Emergency Service in common with other states. Ministerial responsibility for the State Emergency Services is vested in the Attorney-General and Minister for Consumer and Ethnic Affairs.

Legislation

On 1 July 1976, the *Emergency Services Act* came into force. This legislation formally established the State Emergency Service, and set up a counter-disaster control structure for dealing with any major emergency or disaster that might affect the State. Under this legislation the State Emergency Service was given wider functions and responsibilities, and



The Drawing Room, Government House, 1869

[By courtesy of the Archives Office of Tasmania]



The Old Post Office, Macquarie St., Hobart Town, 1869

[By courtesy of the Archives Office of Tasmania]

the responsibilities of municipalities and other bodies were also spelled out. Under the Act, when a State of disaster is declared, command is vested in a State Disaster Executive, consisting of the Commissioner of Police, the Director of Emergency Services, and the Ministerial Liaison Officer (Emergency Services).

Functions

The State Emergency Service has the responsibility for ensuring that the community is adequately prepared to meet any disaster situation that may arise. To this end the Service has the roles of co-ordinating emergency planning, provision of and co-ordination of emergency training, and co-ordinating all supporting and ancillary emergency organisations in support of police and other authorities in time of emergency or disaster.

Administrative Structure

State Emergency Service administration in Tasmania is organised on a three-level basis; municipal, regional and State. The State is divided into three regions, centred on Hobart, Launceston and Burnie. Each region is administered by a full-time regional officer assisted by a staff officer, and operations within regions are co-ordinated from regional headquarters. State headquarters (Hobart) is also responsible for maintaining and operating the central operations centre. The centre is manned at all times by a duty operator and put into action in event of any major emergency.

Training

Training is undertaken at State and regional Headquarters and at Municipal level. The State Emergency Service is responsible for the nomination of Tasmanian representatives attending courses and seminars at the Australian Counter Disaster College, Mount Macedon, Victoria.

Equipment and Finance

Certain items of protective clothing, operational and training equipment for use by the Service are provided annually by the Federal Government through the Natural Disasters Organisation. All other funding is by the State Government—expenditure for 1977-78 was \$540 176.

Fire Prevention and Fire Fighting

State Fire Authority

As recommended in the report of a Board of Inquiry into the Tasmanian Fire Services conducted by Mr. R. G. Cox, the *Fire Brigades Act (No. 2)* of 1977 was passed, whereby the Fire Brigades Commission, established under section 3 of the *Fire Brigades Act 1945*, was abolished on 21 November 1977. The Act also provided for the establishment of the State Fire Authority under the control of a Chief Administrator to whom all duties and powers of the previous Commission were transferred. The Chief Administrator was also charged with responsibility for: (i) restructuring fire brigades throughout the State as necessary; (ii) the co-ordination and direction of the future development of all fire services throughout the State; and (iii) the development of effective fire prevention and protection measures in all areas of the State.

There were, at June 1978, 22 fire brigade boards controlling 39 stations, and their total staff numbered 753 (officers and firemen) comprising 313 permanent personnel and 440 part-time firemen.

Contributions towards the cost of operations continued to be on the basis of 22.5 per cent each from the Treasury and City and municipal councils with the remaining 55 per cent coming from the insurance companies concerned. Details of finances for 1977-78 are shown below:

Fire Brigades Principal Sources of Revenue, 1977-78
(\$'000)

Contributions received by State Fire Authority	Receipts	Distribution made by State Fire Authority	Payments
From— State Government	1 223	To— Fire brigade boards	5 435
City and municipal councils	1 223		
Insurance companies	2 989		
Total	5 435	Total	5 435

Rural Fires Board

Following the fire disaster of February 1967, the Rural Fires Board was reorganised under the *Rural Fires Act 1967* and became fully operative in July 1968.

The Rural Fires Board operates under a chairman appointed by the Governor and consists of 19 members representing: Forestry Commission (two members); Municipal Association (two members); Police; State Fire Authority; pulp and paper making industry; sawmilling industry; Hydro-Electric Commission; The Insurance Council of Australia; Tasmanian Farmers' Federation; Tasmanian Farmers', Stockowners' and Orchardists' Association; Australian Workers' Union; Timber Workers' Union; rural fire brigades (two members); State Emergency Service; and the Administrator of Rural Brigades.

Under the Act, the municipal councils, through fire permit officers approved by the Board, are made responsible for the control and issue of permits for fire used for clearing vegetation during restricted periods. Fire use is controlled during fire danger periods and on days of total fire ban when no fires are permitted. These periods are introduced and removed as the seasonal conditions dictate in various parts of the State. The Act requires each municipal council to form a municipal fire committee for the purpose of promoting the formation of rural fire brigades and advising the Board on matters of fire restriction, hazard reduction, the provision of funds for purchase of equipment to be used by rural fire brigades and any other fire control matters. Areas with particular fire problems and sparse population may be declared as special fire areas and be the subject of separate schemes sponsored entirely from Government finance.

The Board now has a total paid staff of 55 spread throughout the State at eight different locations. There were 380 rural fire brigades at 30 June 1978. These brigades are composed entirely of registered volunteers involving approximately 10 047 persons. The Board's Budget in 1977-78 was \$1 419 000 comprising: \$890 000 for Board administrative expenditure; \$295 000 for the development of Special Fire Areas (including capital items); \$138 000 for the development of Hobart Special Fire Area (including capital items); \$95 000 for subsidy grants to municipal councils and \$1 000 for workers' compensation cover for brigade members. Half the administrative expenditure of the Board is met by insurance companies insuring rural properties, and half by the Government. Special Fire Area grants to councils and workers' compensation expenditure is borne by the Government. Hobart Special Fire Area expenditure is borne by the Government and the Hobart, Glenorchy and Kingborough Councils.

Forestry Commission

The Commission is responsible for the protection of the State forests (1.5 m hectares) and of other forested Crown land. Close liaison is maintained with the Rural Fires Board as two members of the 19-member Board are representatives from the Forestry Commission.

During 1977-78, 23 948 hectares of State forest and Crown land were burnt including 10 590 hectares of scrub wasteland and 13 358 hectares of forested land. Statistics relating to bush fires fought by the Commission are included in Chapter 8.

Further References

ABS Publications

Public Justice, Tasmania (4501.6) (annual, 1975-76 issue released 10-8-77)

Official Year Book of Australia (1301.0) (normally annual, combined 1977 and 1978 issue released 13-10-78)

Chapter 17

LABOUR, PRICES AND WAGES

EMPLOYMENT

Labour Force and Employment

It is essential to distinguish between 'labour force' and 'employees' since *employment* statistics in this chapter relate mainly to wage and salary earners. These are, however, *only one component of the labour force* which also comprises employers, self-employed persons, unpaid helpers and unemployed persons.

Labour Force

Since the 1966 Census, a set of questions, based on activity in the week before the Census, has been asked to establish who should be included in the labour force. The composition of the labour force as determined by the 1966, 1971 and 1976 Censuses was as follows:

Elements of Labour Force: Censuses, 1966, 1971 and 1976 (a)

Year and sex	Employer	Self-employed	Employee	Unpaid helper	Un-employed	Total in labour force	Total population
1966—Males	8 245	9 162	87 572	432	1 146	106 557	187 390
Females	1 759	1 644	35 451	940	971	40 765	184 045
Persons	10 004	10 806	123 023	1 372	2 117	147 322	371 435
1971—Males	6 841	8 442	90 627	277	1 786	107 973	196 442
Females	1 727	1 892	39 649	760	1 261	45 289	193 971
Persons	8 568	10 334	130 276	1 037	3 047	153 262	390 413
1976 (a)—Males	15 390		92 447	441	4 003	112 281	201 512
Females	6 070		47 254	2 344	2 676	58 344	201 356
Persons	21 460		139 701	2 785	6 679	170 625	402 868

(a) See Chapter 6 for a dissection of the employed population by industry group.

The new approach to labour force classification was as follows: in pre-1966 censuses people had been invited to classify themselves (e.g. as unemployed, employee, etc.) but in 1966, 1971 and 1976 people were invited to describe their *activity* in a specific week and the Statistician, using pre-determined definitions, classified them on the basis of their answers.

Briefly, the new questions asked whether the person: (i) had a job or business of any kind last week (even if temporarily absent from it); (ii) did any work at all last week for payment or profit (unpaid helpers who worked were to answer yes); (iii) was temporarily laid off by his employer without pay for the whole of last week; and (iv) looked for work last week (ways of 'looking for work' were specified on the Census form).

The 1966, 1971 and 1976 labour force included all persons answering *yes* to any one of these four questions. The effect of the new definition was to include additional persons in the

labour force. This applied particularly to those working part-time (sometimes for only a few hours a week), some of whom in earlier censuses may not have considered themselves as '... engaged in an industry, business, profession, trade or service'.

The total of persons recorded as unemployed in 1966, 1971 and 1976 was compiled from persons answering *no* to questions (i), (ii) and (iii) and *yes* to question (iv).

Labour Force Estimates (Intercensal)

The Population Survey

Population censuses tend to be expensive undertakings and are therefore held only at five-yearly intervals. However the demand for regular *census-type* information exists right through the intercensal periods; the most sought data are those describing the labour force. To meet this demand, the Bureau designed in 1960 a special sample of private households and non-private dwellings under the title 'population survey' and it trained teams of interviewers to contact the selected sample units by personal visit with the aim of filling in questionnaires on the spot.

The population survey can be used to collect an extremely wide range of data but the main routine application has been the quarterly labour force enquiry, conducted in February, May, August and November of each year up to February 1978 and monthly, thereafter. The questionnaire is filled in for persons 15 years and over within each sampled unit and the definitions of employment, unemployment, etc. are basically the same in concept as those used in population censuses. Naturally the estimates are subject to sampling error. The specialist reader is referred to the Bureau's Canberra Office publication *The Labour Force* (Ref. No. 6203.0), where tables appear stating the standard error associated with the estimates in specific size ranges. The following table gives details of elements of the civilian labour force based on estimates derived from recent population surveys.

Civilian Population 15 Years of Age and Over, by Employment Status (a) r

Month	Employed (b)			Unemployed (c)		Total labour force (d)		Not in labour force ('000)	Civilian population aged 15 and over ('000)
	Agri-culture ('000)	Other indus-tries ('000)	Total ('000)	Number ('000)	Per cent of labour force	Number ('000)	Per cent of popula-tion		
MALES									
1976—									
August....	9.3	101.8	111.2	4.2	3.6	115.4	79.6	29.5	144.9
November	9.5	102.9	112.4	4.3	3.7	116.7	80.1	28.9	145.6
1977—									
February ..	9.4	103.7	113.1	4.8	4.0	117.9	80.6	28.4	146.2
May	8.9	105.0	113.9	4.0	3.4	117.9	80.4	28.8	146.8
August....	8.8	103.9	112.7	4.4	3.7	117.1	79.6	30.1	147.2
November	8.6	102.8	111.4	4.0	3.5	115.5	78.2	32.2	147.7
1978—									
February ..	9.3	102.2	111.5	7.4	6.2	118.9	80.1	29.6	148.5
March	<i>n.a.</i>	<i>n.a.</i>	109.8	6.8	5.8	111.6	78.4	32.1	148.7
April	<i>n.a.</i>	<i>n.a.</i>	109.8	6.6	5.7	116.3	78.2	32.3	148.7
May	8.8	100.6	109.3	6.5	5.6	115.9	77.9	32.9	148.8
June	<i>n.a.</i>	<i>n.a.</i>	110.4	6.4	5.4	116.7	78.3	32.3	149.1

Civilian Population 15 Years of Age and Over, by Employment Status (a) *r*—continued

Month	Employed (b)			Unemployed (c)		Total labour force (d)		Not in labour force ('000)	Civilian population aged 15 and over ('000)
	Agriculture ('000)	Other industries ('000)	Total ('000)	Number ('000)	Per cent of labour force	Number ('000)	Per cent of population		
FEMALES									
1976—									
August ...	3.6	49.5	53.1	3.9	6.8	56.9	38.8	89.7	146.6
November	3.2	51.3	54.5	4.0	6.8	58.5	39.7	88.8	147.3
1977—									
February .	2.8	49.6	52.4	5.8	9.9	58.2	39.3	90.0	148.1
May	3.1	51.6	54.8	6.1	10.1	60.9	40.9	87.9	148.8
August ...	3.1	52.9	56.0	5.5	8.9	61.5	41.2	87.7	149.2
November	2.3	54.4	56.7	5.5	8.9	62.3	41.6	87.6	149.8
1978—									
February .	3.0	51.2	54.2	6.0	9.9	60.2	39.9	90.5	150.7
March	<i>n.a.</i>	<i>n.a.</i>	57.0	4.7	7.7	61.7	40.9	89.2	151.0
April	<i>n.a.</i>	<i>n.a.</i>	56.3	4.0	6.7	60.3	40.0	90.7	151.0
May	3.2	52.2	55.4	4.3	7.2	99.7	39.5	91.5	151.2
June	<i>n.a.</i>	<i>n.a.</i>	53.3	4.7	8.1	58.0	38.3	93.4	151.5
PERSONS									
1976—									
August ...	12.9	151.3	164.2	8.1	4.7	172.3	59.1	119.2	291.5
November	12.8	154.2	166.9	8.3	4.7	175.2	59.8	117.7	292.9
1977—									
February .	12.1	153.3	165.5	10.6	6.0	176.0	59.8	118.4	294.4
May	12.0	156.7	168.7	10.2	5.7	178.8	60.5	116.8	295.6
August ...	11.9	156.8	168.7	9.9	5.5	178.6	60.3	117.8	296.4
November	10.9	157.3	168.2	9.6	5.4	177.7	59.7	119.8	297.5
1978—									
February .	12.3	153.4	165.7	13.4	7.5	179.1	59.8	120.1	299.2
March	<i>n.a.</i>	<i>n.a.</i>	166.8	11.5	6.5	178.3	59.5	121.4	299.7
April	<i>n.a.</i>	<i>n.a.</i>	166.1	10.6	6.0	176.7	58.9	123.0	299.7
May	11.9	152.8	164.7	10.8	6.2	175.5	58.5	124.4	300.0
June	<i>n.a.</i>	<i>n.a.</i>	163.7	11.1	6.3	174.7	58.1	125.8	300.5

- (a) This series is based on a regular survey of a sample of the population. The estimates relate to all persons aged 15 years and over with the exception of members of the permanent armed forces and certain diplomatic staff.
- (b) Includes all those who, during the survey week: (i) did any work for pay or profit, or (ii) worked 15 hours or more without pay in a family business (or farm), or (iii) had a job, business or farm but were not at work because of illness, holidays, etc. Included in this category are *employers, self-employed persons and employees in agriculture and private domestic service.*
- (c) Includes all those who, during the survey week, did no work at all and who: (i) did not have a job and were actively seeking full-time or part-time work, or (ii) who were laid off without pay for the whole week.
- (d) Includes all those classified as employed or unemployed during the survey week.

Definitional Differences

Later in this chapter is an unemployment series based on persons registered with the Commonwealth Employment Service. Since registration is a voluntary act, the unemployment figures appearing in the labour force series will differ from the registration

series (in the former series 'actively looking for work' is the basis of the unemployment classification).

The next section of this chapter gives details of a monthly employment series which excludes: (i) employers; (ii) the self-employed; (iii) unpaid helpers; and (iv) employees in agriculture, private domestic service and defence forces. However, the labour force series (above) covers all these classes of persons with one exception, the defence forces.

Monthly Series of Employment Statistics

The employment series in this section and the later section 'Industrial Classification of Employees' are based on data (referred to as *bench-marks*) derived from the Population Census of 1971.

Estimates for the period subsequent to the 1971 Census have been derived from three main sources: (i) current pay-roll tax returns; (ii) current returns from government bodies; and (iii) some other direct records of current employment. The figures are supplemented by estimates of the change in employment in areas not covered by these direct collections.

The Australian Standard Industrial Classification is the industry classification now used throughout the series. The industry dissection of the bench-marker has been adjusted, as far as possible, to an enterprise or establishment basis which is the basis for classification of subsequent estimates.

Prior to January 1976, all employers (other than certain exempt organisations) paying more than \$400 a week in wages were required to lodge pay-roll tax returns. The exemption level was raised to \$800 in January 1976, \$923 in January 1977 and \$1 154 in January 1978, but the changes have had little effect on employment estimates.

It should be noted that employees in rural industry and in private domestic service are not included in the estimates because of the inadequacy of current data. The terms *employment*, *number employed*, *employees* and *wage earners* used throughout are synonymous with, and relate to *wage and salary earners* on pay-rolls or in employment in the latter part of each month, as distinct from numbers of employees actually working on a specific date. The estimates include some persons working part-time.

Figures for recent periods are subject to revision. As they become available, particulars of employment obtained from other Bureau collections are used to check and, where necessary, to revise estimates.

The table below gives estimated totals for employees in Tasmania at June and December of each year:

Wage and Salary Earners in Civilian Employment, June and December (Excluding Employees in Agriculture and Private Domestic Service, and Defence Forces)
(^{'000})

Year	June			December		
	Males	Females	Persons	Males	Females	Persons
1973	87.9	41.3	129.2	89.8	43.3	133.1
1974	89.6	44.1	133.7	90.5	44.7	135.2
1975	90.7	46.6	137.3	r 89.4	46.4	r 135.8
1976	88.2	46.8	135.0	89.2	48.3	137.5
1977	88.7	48.4	137.1	88.4	49.3	137.7
1978	87.7	49.5	137.3			

The detailed study of employment trends requires examination of monthly figures; the next table has been compiled to show totals of employees for each month:

Wages and Salary Earners in Civilian Employment, Monthly Estimates (Excluding Employees in Agriculture and Private Domestic Service, and Defence Forces)
(^{'000})

Month	1976			1977			1978		
	Males	Females	Persons	Males	Females	Persons	Males	Females	Persons
January	88.9	45.2	134.1	88.8	48.0	136.8	88.3	49.3	137.6
February	88.9	46.2	135.1	89.1	48.2	137.4	88.3	49.4	137.7
March	89.1	47.1	136.2	89.5	48.6	138.1	88.1	49.5	137.6
April	89.0	46.9	135.9	89.4	48.7	138.1	87.7	49.6	137.3
May	88.5	47.0	135.5	89.2	48.6	137.8	87.8	49.5	137.2
June	88.2	46.8	135.0	88.7	48.4	137.1	87.7	49.5	137.3
July	88.5	47.1	135.6	88.1	48.5	136.6	87.5	49.3	136.8
August	88.3	47.2	135.5	88.1	48.6	136.7	87.2	49.3	136.5
September ..	88.1	47.3	135.4	87.8	48.8	136.6			
October	88.2	47.7	135.9	87.4	48.8	136.2			
November ...	88.6	47.9	136.5	87.9	49.3	137.2			
December ...	89.2	48.3	137.5	88.4	49.3	137.7			

Civilian Employees of Government Bodies

In Tasmania, as in other Australian states, a relatively high proportion of wage and salary earners is employed by government bodies operating at four levels: Federal, State, local and semi-government (with the complication that semi-government authorities may have been created by either Federal or State legislation). For the purpose of these statistics, government employees include persons working on government services such as railways, bus services, banks, post offices, power and light, air transport, education (including universities), radio, television, police, public works, government factories, departmental hospitals and institutions, etc., as well as those engaged in administrative services.

Estimates of private and government employment from January 1976 are on a revised basis which has been designed to achieve uniformity of classification with other statistical collections. The principal changes affecting the private/government dissection of employment estimates are as follows:

- (a) *Hospitals*: Non-departmental 'public' hospitals (other than those run by religious or charitable organisations) are now classified to State Government.
- (b) *Marketing Authorities*: All marketing authorities or boards (other than those which are purely growers' or producers' co-operatives) are now included in the government sector as they exercise functions which are fundamentally those of government.

The next table shows employees according to private and government sectors:

Total Civilian Employees of Private Employers and Government Authorities at 30 June—Revised Series
(^{'000})

Year	Private employers			Government authorities		
	Males	Females	Persons	Males	Females	Persons
1976	59.1	30.0	89.1	29.1	16.8	46.0
1977	59.0	31.0	90.1	29.7	17.4	47.1
1978	57.7	31.2	88.9	30.0	18.3	48.4

The following table shows the number of government employees in Tasmania according to the level of government:

Civilian Employees of Government Bodies at 30 June—Revised Series
(’000)

Year and sex	Level of government			Total
	Federal (a)	State (a)	Local	
1976—Males	5.9	20.7	2.5	29.1
Females	2.1	14.3	0.4	16.8
Persons	8.0	35.1	2.9	46.0
1977—Males	5.9	21.1	2.7	29.7
Females	2.1	14.9	0.4	17.4
Persons	8.0	36.0	3.2	47.1
1978—Males	7.6	19.8	2.7	30.0
Females	2.2	15.7	0.5	18.3
Persons	9.8	35.5	3.1	48.4

(a) Includes semi-government authorities.

Industrial Classification of Employees

The next table specifies the main industrial groups and shows the industrial classification of *civilian employees only*, for recent years:

Wage and Salary Earners in Civilian Employment at 30 June: Main Industry Groups
(Excluding Employees in Agriculture and Private Domestic Service, and Defence Forces)
(’000)

A.S.I.C. Division	Year				
	1974	1975	1976	1977	1978
MALES					
A. (Part) Forestry, fishing and hunting ..	1.1	1.3	1.2	1.4	1.3
B. Mining	4.1	4.3	3.9	3.7	3.6
C. Manufacturing	25.4	24.1	23.8	23.7	22.9
D. Electricity, gas and water	3.3	3.3	3.3	3.3	3.3
E. Construction	11.8	12.6	11.7	11.5	11.3
F. Wholesale and retail trade	14.6	14.5	14.8	15.3	15.2
G. Transport and storage	7.0	7.0	6.1	6.0	5.8
H. Communication	2.1	2.1	2.1	2.0	2.0
I. Finance, insurance, real estate, etc. ...	4.6	4.5	4.6	4.7	4.7
J. Public administration and defence ..	4.7	5.0	5.1	5.2	5.3
K. Community services	7.5	8.1	8.2	8.5	8.9
L. Entertainment, recreation, etc.	3.3	4.0	3.3	3.4	3.4
Total	89.6	90.7	88.2	88.7	87.7
FEMALES					
A. (Part) Forestry, fishing and hunting ..	—	—	0.1	0.1	0.1
B. Mining	0.2	0.2	0.2	0.2	0.2
C. Manufacturing	6.1	5.1	4.7	4.5	4.5
D. Electricity, gas and water	0.3	0.3	0.3	0.3	0.3
E. Construction	0.3	0.3	0.3	0.3	0.4
F. Wholesale and retail trade	10.6	10.4	10.4	11.1	11.3
G. Transport and storage	0.6	0.7	0.7	0.7	0.6
H. Communication	0.8	0.8	0.8	0.8	0.8
I. Finance, insurance, real estate, etc. ...	3.7	3.9	3.9	(a) 4.4	4.3
J. Public administration and defence ..	2.5	2.9	3.0	3.1	3.3
K. Community services	13.3	15.1	16.2	16.9	17.8
L. Entertainment, recreation, etc.	5.6	6.7	6.3	6.1	5.9
Total	44.1	46.6	46.8	48.4	49.5

Wage and Salary Earners in Civilian Employment at 30 June: Main Industry Groups
(Excluding Employees in Agriculture and Private Domestic Service, and Defence Forces)—continued
 ('000)

A.S.I.C. Division	Year				
	1974	1975	1976	1977	1978
PERSONS					
A. (Part) Forestry, fishing and hunting ..	1.1	1.3	1.3	1.5	1.4
B. Mining	4.3	4.5	4.1	3.9	3.8
C. Manufacturing	31.5	29.2	28.5	28.2	27.4
D. Electricity, gas and water	3.6	3.6	3.6	3.6	3.6
E. Construction	12.1	12.9	12.0	11.8	11.7
F. Wholesale and retail trade	25.2	24.9	25.2	26.4	26.5
G. Transport and storage	7.6	7.7	6.8	6.7	6.4
H. Communication	2.9	2.9	2.9	2.8	2.8
I. Finance, insurance, real estate, etc. ..	8.3	8.4	8.5	9.1	9.0
J. Public administration and defence ..	7.2	7.9	8.1	8.3	8.6
K. Community services	20.8	23.2	24.4	25.4	26.7
L. Entertainment, recreation, etc.	8.9	10.7	9.6	9.5	9.3
Total	133.7	137.3	135.0	137.1	137.3

(a) Increase over 1976 due principally to changes in Health Insurance activities.

UNEMPLOYMENT

Census Data

In the 1966 Population Census, the following question was asked: 'Did the person look for work last week? Answer *yes* or *no*.' (Note: 'Looking for work' means: (i) being registered with the Commonwealth Employment Service; or (ii) approaching prospective employers; or (iii) placing or answering advertisements; or (iv) writing letters of application; or (v) awaiting the results of recent applications.) In the 1971 and 1976 Censuses this question was asked again with one refinement: was the person seeking a job for the first time or had the person had other jobs before?

After the exclusion of persons who were already employed, but who were seeking alternative employment, the following data were obtained:

Labour Force and Unemployed Persons, 1966, 1971 and 1976 Censuses

Year (30 June) and sex	Labour force	Unemployed	
		Number	Proportion of labour force (per cent)
1966—Males	106 557	1 146	1.1
Females	40 765	971	2.4
Persons	147 322	2 117	1.4
1971—Males	107 973	1 786	1.7
Females	45 289	1 261	2.8
Persons	153 262	3 047	2.0
1976—Males	112 281	4 003	3.6
Females	58 344	2 676	4.6
Persons	170 625	6 679	3.9

Registrations with Commonwealth Employment Service

The Commonwealth Employment Service

The Commonwealth Employment Service (CES) was originally established by federal legislation under Section 47 of the *Re-Establishment and Employment Act* 1945 and under the *Social Services Legislation Declaratory Act* 1947. In August 1978 a new *Commonwealth Employment Service Act* was passed providing for a National Director and State Directors of the CES and National, State and local committees, with an advisory role comprising a range of representatives from the community.

The functions of the CES are:

- (i) To assist persons seeking employment or a change in employment to obtain suitable positions having regard to their experience, training or qualifications, and to the economic and other needs of the Australian community. In particular to: (a) provide persons with information relating to employment, such as advice about qualifications for occupations and vocational guidance; and (b) make special arrangements and facilities to assist immigrants, Aborigines, the young, the handicapped, school leavers and those with professional or technical qualifications or those who have special requirements or disadvantages in relation to employment.
- (ii) To assist employers to fill vacant positions with available persons who are suitable for the performance of the duties and who meet employers' requirements for the positions.
- (iii) To promote and implement manpower programs and other measures designed to ensure a high level of employment.
- (iv) To register persons who are unemployed and who wish to claim unemployment benefits under the *Social Services Act* 1947 and provide help in seeking employment for persons claiming or receiving such benefits.
- (v) To publish information about the labour market or services relating to employment.
- (vi) To collect statistics and other information relating to the labour market.

'Registered for Employment'

In the following table the persons shown are those who claimed, when registering for full-time work (35 hours or more per week) with the CES, *that they were not employed* and who were recorded on the Friday nearest the last day of the month as unplaced. The count includes those referred to employers and those who may have obtained employment without notifying the CES; persons receiving unemployment benefit are included.

**Persons Registered for Employment with Commonwealth Employment Service
At June and December of Each Year (a)**

Year	June				December			
	Males	Females	Persons		Males	Females	Persons	
			Number	Rate (b)			Number	Rate (b)
1973.....	2 201	1 517	3 718	2.2	2 560	1 911	4 471	2.7
1974.....	1 968	1 342	3 310	2.0	4 089	3 251	7 340	4.3
1975.....	3 648	2 542	6 190	3.6	6 450	3 791	10 241	5.9
1976.....	5 840	3 146	8 986	5.1	6 464	3 734	10 198	5.8
1977.....	5 142	3 644	8 786	4.9	8 266	4 355	12 621	7.1
1978.....	8 261	3 683	11 944	6.8				

(a) Recorded as unplaced on the Friday nearest the last day of the month.

(b) Persons registered for employment as a percentage of the estimated *total* labour force. Labour force estimates used are the latest available up to the month in question (i.e. the relevant May or November estimates for years prior to 1978 in which year the population survey was changed from a quarterly to a monthly basis).

In interpreting the level of registration, account should be taken of the fact that registration is a *voluntary* act. Thus, while an increase in registrations may normally be taken to indicate an increase in unemployment, theoretically at least, it could merely indicate wider use of the facilities offered by the Commonwealth Employment Service. (There is an alternative source of data on unemployment which does not suffer from this disability; the section 'Intercensal Labour Force Estimates' earlier in this chapter includes a series showing the number of persons unemployed as one element of the labour force. 'Actively looking for work' is the basis of classification in the labour force series.)

The table that follows has been compiled to show the number registered for employment at the end of each month. The monthly figures are subject to pronounced seasonal influences, the most obvious being the effect of school-leavers on registrations in December and January.

**Persons Registered for Employment With Commonwealth Employment Service
At End of Each Month (a)**

Month	1976			1977			1978		
	Males	Females	Persons	Males	Females	Persons	Males	Females	Persons
January	7 775	4 071	11 846	6 845	3 850	10 695	8 390	4 417	12 807
February	6 426	3 857	10 283	6 174	3 870	10 044	8 395	4 484	12 879
March	5 448	3 399	8 847	5 092	3 593	8 685	7 853	4 198	12 051
April	5 063	3 376	8 439	4 555	3 420	7 975	7 673	4 007	11 680
May	5 484	3 167	8 651	4 665	3 451	8 116	8 033	3 966	11 999
June	5 840	3 146	8 986	5 142	3 644	8 786	8 261	3 683	11 944
July	6 098	3 145	9 243	6 043	3 462	9 505	8 396	3 624	12 020
August	6 182	3 025	9 207	6 217	3 523	9 740	8 393	3 688	12 081
September	6 217	2 910	9 127	6 162	3 254	9 416	8 679	3 816	12 495
October	5 994	2 907	8 901	6 283	3 051	9 334			
November	5 739	2 803	8 542	6 572	3 285	9 857			
December	6 464	3 734	10 198	8 266	4 355	12 621			

(a) At Friday nearest last day of month.

Differences between Population Surveys Estimates of Unemployment and Commonwealth Employment Service Figures

The population (labour force) surveys sample estimates of unemployment will differ from the number of persons registered with the Commonwealth Employment Service as *not employed, awaiting placement in full-time employment* for a number of reasons, including the following:

- (i) the survey estimates include persons looking for part-time as well as full-time work;
- (ii) they include some unemployed persons (particularly females) who do not register with the Commonwealth Employment Service;
- (iii) they exclude persons who did any work at all during the survey week, even though they may subsequently have become unemployed and registered with the Commonwealth Employment Service, or have done so little work as not to lose eligibility for unemployment benefit;
- (iv) they exclude any persons registered as unemployed who find jobs but do not notify the Commonwealth Employment Service at once that they have done so;
- (v) they represent averages over a period whereas the numbers registered refer to a particular day near the end of the month; and
- (vi) they are subject to sampling variability.

Survey of Persons Registered with the Commonwealth Employment Service as Unemployed, March 1977, Australia

This survey was based on a sample, selected by the Bureau, of the addresses of persons registered as unemployed in the records of Commonwealth Employment Services (C.E.S.) offices within metropolitan statistical divisions of the six state capital cities as at 18 March 1977. About two per cent of addresses were included in the sample.

During the period 21 to 25 March, interviews were conducted by Bureau officers at the selected addresses, using a questionnaire similar to that used in the normal labour force survey. Information was sought with respect to all usual residents at the selected addresses. It should be noted that the person interviewed was not necessarily the person registered with the C.E.S., whose name was not known to the interviewer.

Survey questionnaires were matched with the selected C.E.S. records by Bureau officers. Information was not obtained in respect of some registrants. Such persons are shown as 'non-respondents'.

The survey results showed that of 135 000 respondents, 22.0 per cent were *employed*, 70.2 per cent were *unemployed* and 7.8 per cent were *not in the labour force*. Of the 55 400 non-respondents, 2 400 had given non-existent addresses and 4 100 had given insufficient address; 3 700 dwellings were apparently not inhabited and at 29 600 dwellings the registrant apparently did not reside at that address.

Persons Receiving Unemployment Benefit

It is possible for a person to register as unemployed but make no claim for unemployment benefit. On the other hand, a person claiming unemployment benefit is *required* to register for employment. The next table gives details of persons receiving unemployment benefit each month.

Number of Persons Receiving Unemployment Benefit (a)

Month	1972	1973	1974	1975	1976	1977	1978
January	1 125	2 572	2 706	4 687	8 516	7 397	9 244
February	1 144	2 439	2 538	5 413	7 169	7 501	9 577
March	1 113	1 881	1 630	4 938	6 438	6 926	8 785
April	1 191	1 862	1 748	3 664	6 425	6 575	9 119
May	1 278	2 242	1 655	3 835	6 611	6 554	9 383
June	1 697	2 330	1 769	4 439	7 228	7 078	9 757
July	1 922	2 279	2 325	4 787	7 603	7 978	9 770
August	1 854	2 200	2 615	5 223	7 609	7 917	9 935
September	1 813	2 067	3 139	5 378	7 541	8 083	10 206
October	1 698	1 692	3 166	5 369	7 210	8 037	
November	1 879	1 782	2 650	5 634	7 053	7 179	
December	2 214	2 029	4 210	8 096	7 009	7 610	

(a) Compiled from information furnished by the Department of Social Security. From March 1976 monthly figures are not directly comparable because of differences in accounting periods. Some monthly figures relate to the end of a four-week period and others to a six-week period. Prior to March 1976 the figures relate to the Saturday nearest the end of the month.

The number of males and females in receipt of unemployment benefit at the end of June is shown for recent years in the following table:

Persons Receiving Unemployment Benefit at June (a)

Particulars	1973	1974	1975	1976	1977	1978
Males	1 306	1 034	2 717	4 927	4 381	6 881
Females	1 024	735	1 722	2 301	2 697	2 876
Persons—						
Number	2 330	1 769	4 439	7 228	7 078	9 757
Proportion (b)	1.4	1.1	2.6	4.1	4.0	5.6

(a) See footnote to previous table.

(b) Persons receiving benefit as a percentage of the estimated total labour force. Rates for 1973 to 1977 are based on labour force estimates for May.

Unemployment Rates

The next table brings together details relating to the civilian labour force, persons registered for employment with the Commonwealth Employment Service and persons receiving unemployment benefits. Estimated unemployed (from the population survey), registered unemployed and unemployment benefit recipients are shown as proportions of the total labour force. It is noted that, while the labour force includes part-time workers and those seeking part-time work, only those seeking full-time work (35 hours or more per week) are registered with the C.E.S. and registration is a voluntary act.

The Civilian Labour Force, Unemployment and Unemployment Rates for May each Year

Particulars	1975	1976	1977	1978
Civilian labour force (a)—				
Employed (b).....'000	163.7	167.7	168.7	164.7
Unemployed—				
Looking for full-time work (c).....'000	n.a.	n.a.	8.1	9.6
Looking for part-time work (d).....'000	n.a.	n.a.	2.1	(e)
Total unemployed.....'000	6.7	8.5	10.2	10.8
Total labour force.....'000	170.4	176.1	178.8	175.5
Unemployment rate (f).....%	4.0	4.8	5.7	6.2
Registered unemployed—				
Persons (g).....'000	5 926	8 651	8 116	11 999
Rate (h).....%	3.5	4.9	4.5	6.8
Unemployment benefit recipients—				
Persons.....'000	3 835	6 611	6 554	9 383
Rate (i).....%	2.3	3.8	3.7	5.3

(a) Aged 15 years and over; estimates derived from the population survey (see the earlier section 'Labour Force Estimates').

(b) Includes : (i) full-time workers who usually work for 35 hours or more per week and others who did so during the survey week; and (ii) part-time workers who usually work for less than 35 hours per week and who worked for one hour but for less than 35 hours for pay, or who worked for 15 hours or more without pay, during the survey week.

(c) Persons not classified as employed but who had actively looked for full-time work (35 hours or more per week) during the last month.

(d) Persons not classified as employed but who had actively looked for part-time work during the last month.

(e) Subject to sampling variability too high for most practical uses.

(f) Total unemployed as a proportion of the total labour force.

(g) Persons registered for employment (work of 35 hours or more per week) with the C.E.S.

(h) Registered unemployed (for full-time work) as a proportion of the total labour force.

(i) Unemployment benefit recipients as a proportion of the total labour force.

DEPARTMENT OF EMPLOYMENT AND INDUSTRIAL RELATIONS

In addition to its function of operating the Commonwealth Employment Service, the Employment Division of the Department of Employment and Industrial Relations has controlled schemes aimed at reducing the recent high level of unemployment. A brief description of these schemes follows.

National Employment and Training System

In October 1974 the employment training schemes administered by the then Department of Labour and Immigration, together with the Training Scheme for Widow Pensioners, were superseded by the National Employment and Training System.

The National Employment and Training (N.E.A.T.) System provides a comprehensive system of labour market training designed to remedy labour imbalances by:

- (i) Alleviating unemployment where it occurs and overcoming skills in short supply.

- (ii) Assisting in the long-term restructuring of the work force by promoting regional development and bringing about overall increases in the general level of skills. Training arrangements cover the full range of occupational skills and, as necessary, provide preliminary and preparatory instruction needed to assist entry into normal training programs and to meet the needs of particular individuals such as the handicapped.

Facilities approved for training include those provided by public and private education institutions but of growing importance is the training provided by industry and commerce by arrangement with employers and with employer industry and trade associations. Trainees are approved primarily on the basis of labour market demand for their existing and proposed skills. Subject to a means test, trainees attending educational institutions receive training allowances. Employers who provide approved programs of in-industry training and meet the wage costs of trainees are paid a subsidy for the duration of approved training periods.

All applications for employment training through N.E.A.T. are made with the Commonwealth Employment Service which, in its capacity as an employment referral centre, is able to test the labour market and determine an individual's need for training as a means of obtaining satisfactory employment.

Special initiatives under the N.E.A.T. System have been enacted in recent years in an attempt to offset the high levels of youth unemployment. These include:

- (i) The special youth employment training programme (S.Y.E.T.P.). This provides a substantial subsidy for an extended training period to employers willing to provide employment and training to youths who have been unemployed for more than four months in the past year.
- (ii) The Special Assistance Program (S.A.P.) which provides subsidies to employers of apprentices threatened by work shortage, or allowances for full-time trade training for apprentices whose indentures have been suspended.
- (iii) The education program for unemployed youth (E.P.U.Y.). This is a program initiated by the Commonwealth Department of Education to increase the employment prospects of unemployed young people through use of State Education Department facilities. Trainees are paid a N.E.A.T. allowance while attending these courses.

Community Youth Support Scheme

The Community Youth Support Scheme (C.Y.S.S.) is a Federal Government Scheme which was introduced in October 1976 as a means of encouraging local community groups to become involved in assisting unemployed young people. The scheme, which is the first of its kind, recognises that young people experiencing periods of unemployment at a time when there is a shortage of jobs may need support or assistance.

The form in which this support may be offered varies according to the particular needs of the young people concerned. Organisations and groups within the community are encouraged to seek funding to run programs and services for young unemployed people. The scheme is designed to complement other Government initiatives previously introduced to increase employment and training opportunities for young people. Accordingly, C.Y.S.S. programs must contain some orientation towards employment. This need only be in fairly general terms. It is not intended that C.Y.S.S. should provide formal skills training as this may be dealt with under N.E.A.T.

C.Y.S.S. is not a job creation program, nor is it a means of getting jobs done for organisations which need free labour. C.Y.S.S. may help young people in several ways:

- (i) By better equipping them to get a job. Sessions on how to handle job interviews, how to go about applying for a job and even where to look for jobs will give a young person confidence and a better chance of finding employment.
- (ii) By giving assistance with social, financial, educational, health and general welfare problems that could be making it more difficult for them to find employment.

- (iii) By providing a wide range of activities to make the period of unemployment more interesting and more creative. Because of the shortage of job vacancies some young people may face long periods of unemployment. They may become bored, frustrated and disillusioned. C.Y.S.S. funds may be used to provide outdoor activity, art and craft workshops, sessions on basic car maintenance, cookery, etc.

Any young person registered with the Commonwealth Employment Service is eligible to participate in C.Y.S.S. projects. Bus fares and other necessary expenses incurred in attending a C.Y.S.S. project are reimbursed up to a maximum of \$6 per week.

INDUSTRIAL LEGISLATION AND CONDITIONS

Apprenticeship

Apprenticeship Commission

The Apprenticeship Commission was set up under the *Apprentices Act 1942* to: (i) encourage, regulate and control training in proclaimed trades; (ii) assist youths towards successful trade courses; and (iii) provide properly trained craftsmen for industry. The Commission, which meets each month, consists of three representatives of trade unions, three of employers' organisations, a nominee of the Minister for Education and the President, all members being appointed for a three-year term. To keep the Commission up-to-date with the latest developments, Trade Committees have been formed for particular industries, with both employers and employees represented.

Apprentices are trained at work and at technical classes, and supervisors report on the effectiveness of the training; supervisors also give on-the-spot advice to employers and apprentices where their mutual obligations are concerned and refer matters that cannot be settled in this way to the Commission for decision.

Apprenticeships

An apprenticeship may not be commenced without the consent of the Commission which determines the suitability of employers for training apprentices and the educational qualifications required for entry to a particular trade.

The apprentice serves a probationary period before a contract (indentures) is made with the employer and registered with the Commission. The Commission determines disputes about the contracting parties' rights, duties and liabilities and no apprenticeship may be terminated, suspended or assigned other than by its authority; when an apprenticeship has been completed, the employer and the Commission certify to this effect. Where apprentices are required to undertake technical training, either at technical classes or by correspondence, instruction is mandatory. Apprentices attend technical classes for eight hours per week during working hours without loss of pay. (Country apprentices in remote areas attend three fortnightly training periods each year.) The progress apprentices make is reported to the Commission and unsatisfactory reports are investigated.

Apprentices are encouraged in the following ways: (i) by payment of *proficiency allowances* for annual examinations passed successfully in the allotted time; (ii) by *certificates of proficiency* for apprentices successfully completing the mandatory trade course of technical instruction; (iii) by reducing the apprenticeship term by one year in some cases, where the qualifying trade course is completed in the allotted time; and (iv) by the award of bursaries.

The Commission offers an award to the outstanding apprentice in each of the building, automotive, electrical, metal and other trades, and from these five apprentices, the 'Apprentice of the Year' is selected and qualifies for an award of \$600. Other awards are to the value of \$450. Should there not be any outstanding apprentice in any particular trade group, the prize allotted for that group may be awarded to other trade groups.

Number of Apprentices

The following table shows the number of apprentices in Tasmania and also details of apprenticeships registered and completed:

Number of Apprentices, Apprenticeships Registered and Completed

Particulars	1972-73	1973-74	1974-75	1975-76	1976-77
Number at 30 June (a)—					
Indentured apprentices	3 281	4 035	4 265	4 285	4 450
Apprentices on probation	322	180	218	183	356
Total	3 603	4 215	4 483	4 468	4 806
During year—					
New apprenticeships registered	1 117	1 404	1 312	1 413	1 427
Apprenticeships completed	882	750	771	1 052	1 007

(a) Distributed in proclaimed trades.

Industrial Safety and Accident Prevention

General

Responsibility: The Department of Labour and Industry administers legislation relating to safety, health and welfare in workforces generally (but excluding workforces subject to the *Mines Inspection Act* 1968 which prescribes safety standards for mines and mining works and is administered by the Mines Department). The Department's Technical Services Division inspectorate performs inspection and advisory functions throughout the State.

Prevention: Prevention obviously has a two-fold aspect: (i) inspection programs aimed at pin-pointing unsafe working conditions; and (ii) education and training designed to eliminate unsafe actions.

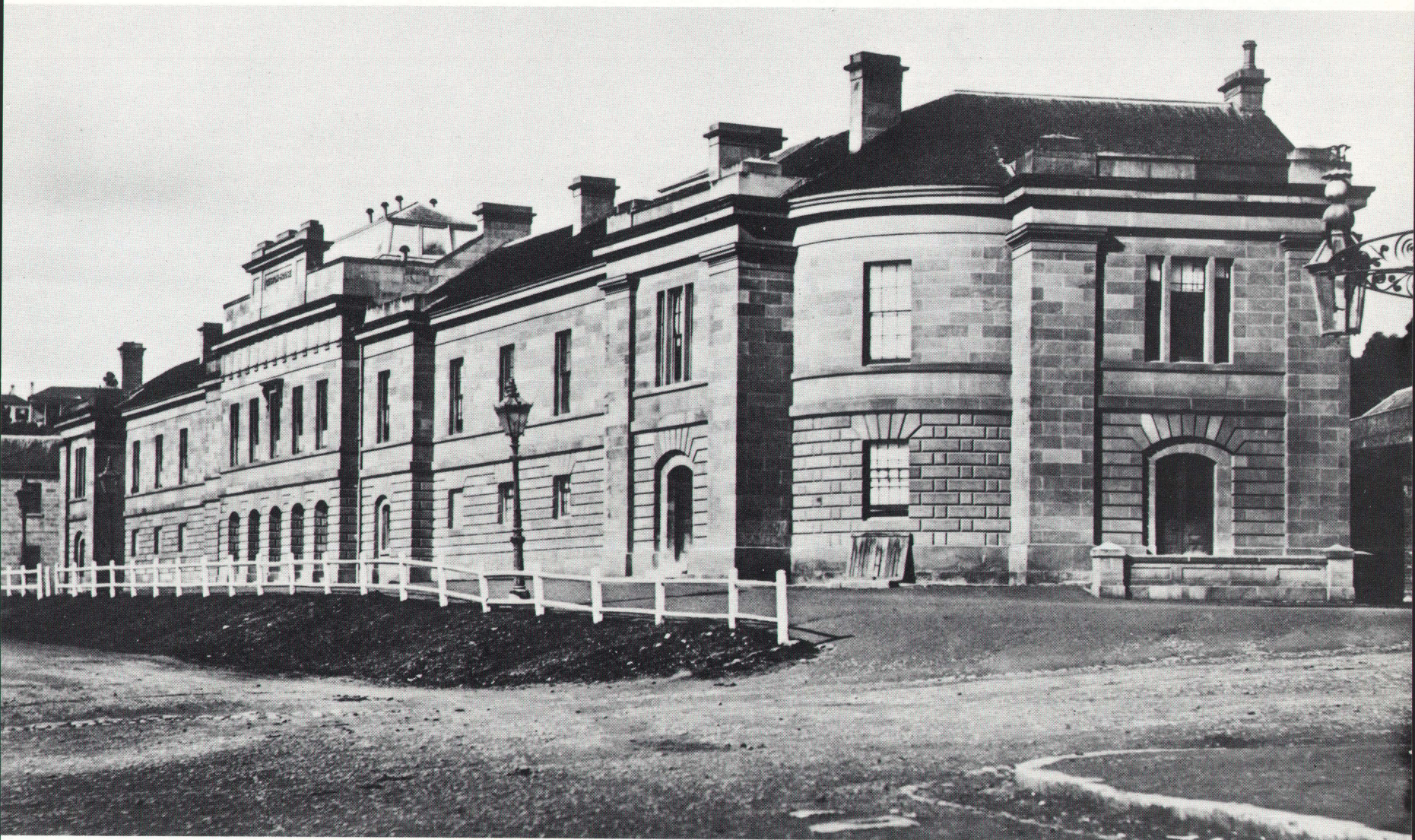
Training: The Department endeavours to develop an attitude of 'safety consciousness' among employees and employers. This is the primary aim of general safety training. More specific training is basically aimed at educating supervisors and foremen, since an attitude of 'safety consciousness' must involve management. Formal training in industrial safety and accident prevention is available at Hobart and Launceston Technical Colleges in two year courses. Informal training is arranged by the Department of Labour and Industry, the two-day courses being based on the concept of 'training within industry'. Single lectures on industrial and farm safety are also available and the Department makes arrangements to provide lecturers on request.

Safety Officers: It is expected that large undertakings will have their own specialists concerned with safety matters. However, government safety officers are available to industries which may use their services for short periods. Their function is purely advisory and they assist organisations which wish to stress safety or to reduce their accident rates.

Research Facilities: The Department carries out a safety research program. A comprehensive classification of safety data and information is maintained from local, interstate and overseas sources.

Factory Legislation

Working conditions in factories in Tasmania are covered under the *Factories, Shops and Offices Act* 1965 which makes provisions with respect to the health, welfare, safety and working conditions of persons employed in factories, shops and offices, and the sanitation of factories, shops and offices. All factories are required to register with the Department of Labour and Industry; fees date from 1 January each year. Fees for registration range from \$3 for small factories (where less than four persons are employed), up to \$345 for factories employing more than 800 persons. See the 1977 and earlier *Year Books* for greater detail relating to factory legislation and factory inspection.



Parliament House, Hobart Town, c. 1870

[By courtesy of the Archives Office of Tasmania]



Franklin Square, Hobart Town, c. 1860

[By courtesy of the Archives Office of Tasmania]

Inspection of Machinery

Generally, the *Inspection of Machinery Act 1960*, as amended, applies to all machinery of one or more horsepower used in manufacturing or industrial processes and specifically includes boilers, pressure vessels, lifts and cranes. By proclamation, machines not ordinarily covered by the Act may be made subject to its provisions. The Department of Labour and Industry is responsible for application of the Act which is administered by a chief inspector and district inspectors at Hobart, Launceston, Burnie and Devonport.

Safety on Construction Sites

Safety on construction work is covered by provisions of the *Factories, Shops and Offices Act 1965*, the *Scaffolding Act 1960* and the *Inspection of Machinery Act 1960*.

Industrial Safety, Health and Welfare Act

The *Industrial Safety, Health and Welfare Act 1977* will progressively repeal the *Factories, Shops and Offices Act 1965*, the *Scaffolding Act 1960* and the *Inspection of Machinery Act 1960*. This Act combines the major provisions of these three Acts into one enactment and otherwise provides wide regulation-making powers in respect of safety, health and welfare matters generally. The Act and regulations have application to all work places (other than those subject to the *Mines Inspection Act 1968*).

Industrial Accidents

Industrial accident statistics in Tasmania are compiled from returns of workers' compensation claims submitted by insurance companies, self-insurers and State Government departments. The returns are submitted for cases finalised; the statistics do not represent the number of accidents occurring in a particular year. The statistics first published by the Bureau for 1969-70 replaced those formerly published by the Department of Labour and Industry. Because of the number of minor definitional, conceptual and classification changes adopted for the new series, the statistics shown in the following tables are not strictly comparable with those published for 1968-69 and earlier years.

The collection is limited to those employees covered by the *Tasmanian Workers' Compensation Act* and therefore excludes self-employed persons, Federal Government employees and the police. Exclusion of self-employed persons is likely to reduce coverage in industries where self-employment is prevalent (e.g. retail trade, rural industries, etc.). Because of the exclusion of Federal Government employees, some industries are not covered at all, while coverage is considerably reduced in other industries (e.g. communications).

In compiling the statistics the following definitions have been adopted:

Industrial Accident: A compensated work injury causing death or absence of the injured person from work for one day or more. Disease cases and accidents occurring during journeys or recess periods are included. The number of accidents is based on claims finalised during each year ended 30 June. The accidents to which the claims refer may have occurred in the year the claim was finalised or during any earlier year.

Time Lost: The actual time lost from work of persons reported to be temporarily incapacitated or permanently partially-incapacitated as a result of a compensated work injury.

Cost of Claims: Includes compensation for wages lost, hospital and medical expenses and lump sum settlements of cases finalised during the year ended 30 June.

Industry Groups: Classified in accordance with the Australian Standard Industrial Classification.

The table that follows shows the number of industrial accidents reported during 1976-77 and the time lost through those accidents which caused temporary and permanent partial-disability.

Fatal and Non-fatal Industrial Accidents: Industry Group and Time Lost, 1976-77

Industry group	Accidents		Time Lost	
	Fatal	Non-fatal	Total	Average per accident
	no.	no.	weeks	weeks
Primary, mining, etc.—				
Primary production	1	519	1 338	2.6
Mining	1	608	1 180	1.9
Total	2	1 127	2 518	2.2
Manufacturing—				
Food, drink, etc.	—	866	1 388	1.6
Wood and wood products, etc.	1	826	1 757	2.1
Glass and clay products, etc.	—	78	280	3.6
Metal and metal products, etc.	—	1 099	2 152	2.0
Transport equipment	—	172	312	1.8
Other manufacturing	—	580	1 540	2.7
Total	1	3 621	7 429	2.1
Other industries—				
Electricity, gas, etc.	—	307	590	1.9
Construction	1	1 902	3 490	1.8
Wholesale and retail trade	—	1 030	2 356	2.3
Transport, storage, etc.	1	462	1 353	2.9
Finance and property	—	53	164	3.1
Public administration	—	29	74	2.6
Community services	—	334	941	2.8
Amusements, hotels, etc.	—	244	726	3.0
Total	2	4 361	9 693	2.2
Grand total	5	9 109	19 640	2.2

The cost of claims arising out of industrial accidents, as applicable to each industry group, is shown in the next table:

Industrial Accidents: Industry Group and Cost of Claims, 1976-77
(\$)

Industry group	Cost of Claims			
	Fatal accidents	Non-fatal accidents	Total accidents	Average per non-fatal accident
Primary, mining, etc.—				
Primary production	24 401	280 516	304 917	540
Mining	2 542	287 370	289 912	473
Total	26 943	567 886	594 829	504
Manufacturing—				
Food, drink, etc.	—	253 780	253 780	293
Wood and wood products, etc.	1 329	383 688	385 017	465
Glass and clay products, etc.	—	45 013	45 013	577
Metal and metal products, etc.	—	435 701	435 701	396
Transport equipment	—	53 718	53 718	312
Other manufacturing	—	213 121	213 121	367
Total	1 329	1 385 021	1 386 350	382
Other industries—				
Electricity, gas, etc.	—	118 412	118 412	386
Construction	17 626	729 254	746 880	383
Wholesale and retail trade	—	402 375	402 375	391
Transport, storage, etc.	1 050	224 716	225 766	486
Finance and property	—	20 941	20 941	395
Public administration	—	15 477	15 477	534
Community service	—	149 658	149 658	448
Amusements, hotels, etc.	—	120 430	120 430	494
Total	18 676	1 781 263	1 799 939	408
Grand total	46 948	3 734 170	3 781 118	410

Workers' Compensation

Legislation: Workers' compensation legislation in Tasmania was first introduced in 1910 but it was not until 1927 that the principle of compulsory insurance was embodied in the *Workers' Compensation Act 1927*.

Purpose and Limitations: The principle of the Act is provision for compensation on the death or disablement of a worker, if occasioned by personal injury arising out of and during the course of employment. In 1970 the Act was amended to extend compensation cover for injuries sustained by a worker travelling in either direction between his residence and place of employment. The Act provides that this cover to and from work applies only for reasonably direct journeys, except for breaks or deviations connected with the worker's employment. Amendments in 1970 extended coverage to workers who are temporarily absent from work during meal breaks. Self-inflicted injuries are excluded and certain limitations are applied where serious or wilful misconduct is involved. Monetary benefits have fixed limits. All reasonable costs of medical, hospital, nursing and ambulance services, and in the event of death, the reasonable costs of burial or cremation are paid. In addition, weekly payments are made during periods of incapacity and there is provision for a lump sum entitlement for specified injuries included in a schedule to the Act.

Non-contributory Basis: The Act is non-contributory, i.e. the worker does not pay into any fund for the provision of benefits. The employer is obliged to insure with an approved insurance company against the liability to compensation, except in certain cases where he is allowed to carry his own risk. In any case where an employer has no paid-up insurance policy, where the employer cannot be found or where the employer or his insurance company has become insolvent, the worker may claim against a 'nominal insurer', as if he were the employer. Amounts paid by the 'nominal insurer' are provided by all insurance companies carrying on workers' compensation business. Each company is required to contribute to these types of claims in proportion to the premium income derived from policies issued during the preceding year.

Compensation on Death: Where death results from an injury, the compensation payable to dependants wholly dependent on the worker's earnings is 284 times the current Hobart base rate, plus seven times the current Hobart base rate for each worker's child under sixteen years at the date of injury. Partial dependants are entitled to proportionate amounts.

Base Rate means the minimum weekly wage payable to the lowest paid adult male employed at Hobart under the federal Metal Trades Award (in June 1978 the minimum was \$117.20 per week).

Weekly Payments During Incapacity: When the worker is *totally incapacitated* he is entitled to receive weekly compensation payments at whichever of the following alternatives is greater: (i) the rate of his average weekly earnings over the period of twelve months immediately preceding the period of incapacity; or (ii) the ordinary time rate of pay for the work on which he was engaged immediately prior to the period of incapacity. When the worker is *partially incapacitated* the weekly payments are reduced by any amount that he is able to earn in some other suitable employment.

Maximum Limit of Weekly Payments: In cases of partial or total incapacity of any worker, the total liability of an employer in making weekly compensation payments is limited to 284 times the current Hobart base rate.

Lump Sum Payments: In addition to weekly incapacity payments, lump sum payments are made in respect of the loss of members of the body or of bodily powers of function. In the Act, specific injuries are listed and the single amount payable is related to the current Hobart base rate (specified as B in the following examples): (i) loss of both feet, $B \times 284$; (ii) loss of leg, $B \times 138$; (iii) loss of thumb, $B \times 51$; and (iv) loss of great toe, $B \times 35$, etc. Where more than one of these injuries are suffered in the same accident, a maximum payment equal to $B \times 532$ may be paid.

Long Service Leave for Casual Employees

The *Long Service Leave Act 1976* provides for the granting of 13 weeks long service leave to all employees who complete 15 years continuous service with one employer. A pro-rata

entitlement applies in respect of termination of employment after less than 15 years service in certain circumstances.

Contributions to a Long Service Leave (Casual Employment) Fund are made by employers with respect to all casual employees covered by the Act. For further details, reference should be made to the 1977 or earlier editions of the *Year Book*.

TRADE UNIONS

The following table shows details of the number of unions and the number of union members in Tasmania:

Trade Unions: Numbers and Membership

Year ended 31 December	Number of separate unions	Number of members (^{'000})	Annual increase in membership (a) (per cent)
1972.....	112	80.5	7.1
1973.....	118	84.1	4.5
1974.....	121	89.1	5.9
1975.....	117	87.4	-1.9
1976.....	119	86.9	-0.6
1977.....	120	90.4	4.0

(a) On preceding year.

PRICES

Retail Prices and Price Indexes

Retail Price Index Numbers from 1901

Retail prices of food and groceries and average rentals of houses for periods extending back to the year 1901 were collected by the Australian Statistician. A continuous price series from 1901 to the present day (shown in part below) has been constructed from the various indexes in use during this period to provide a broad indication of long-term trends in retail price levels for Australia. The index numbers are derived by linking a number of indexes that differ greatly in scope. The successive indexes used are 1901-1914, the 'A' Series; from 1914 to 1946-47, the 'C' Series; from 1946-47 to 1948-49, a composite of Consumer Price Index Housing Group (partly estimated) and 'C' Series excluding rent; and from 1948-49, the Consumer Price Index.

Retail Price Index Numbers from 1901: Six State Capital Cities Combined
(Base: Year 1911 = 100)

Year	Index number	Percent- age change (a)	Year	Index number	Percent- age change (a)	Year	Index number	Percent- age change (a)
1901.....	88		1946.....	190	+1.6	1971.....	621	+6.0
1911.....	100	+3.1	1951.....	313	+19.5	1972.....	658	+6.0
1921 (b).....	168	-13.0	1956.....	419	+6.3	1973.....	720	+9.4
1926.....	168	+1.8	1961.....	471	+2.6	1974.....	829	+15.1
1931.....	145	-10.5	1966.....	517	+3.0	1975 (c).....	954	+15.1
1936.....	141	+2.2	1969.....	564	+2.9	1976 (d).....	r 1 083	+13.5
1941.....	167	+5.0	1970.....	586	+3.9	1977.....	r 1 216	+12.3

(a) Over previous year (previous year's figures not necessarily shown in table).

(b) November; remaining figures are averages for the respective years.

(c) Affected by the introduction of Medibank and the consequent reduction in cost of hospital and medical services.

(d) Includes the effects of price increases in hospital and medical services associated with changes to Medibank.

Consumer Price Index

The index currently in use is the Consumer Price Index. The present composition and weighting pattern of the Consumer Price Index is given in the following table:

Consumer Price Index
Composition and Weighting Pattern at September Quarter 1976 (a):
Six State Capital Cities Combined

Group, section, etc.	Percentage weight	
	Section, etc.	Group
Food—		
Dairy produce	2.138	21.026
Cereal products	2.384	
Meat and seafoods—Meat	4.537	
Fish	0.420	
Fruit and vegetables—Fresh fruit and vegetables	2.017	
Processed fruit and vegetables	0.889	
Soft drinks, icecream and confectionery	2.080	
Meals out, take away food—Meals out	2.072	
Snacks, take away food	2.331	
Other food	2.158	
Clothing—		
Men's and boys' clothing—Men's clothing	2.339	10.141
Boys' clothing	0.589	
Women's and girls' clothing—Women's clothing	3.911	
Girls' clothing	0.578	
Piecegoods and other clothing	0.538	
Footwear—Men's footwear	0.549	
Women's footwear	0.774	
Children's footwear	0.328	
Clothing and footwear services	0.535	
Housing—		
Rent—Privately owned dwellings	4.779	13.544
Government owned dwellings	0.468	
Home ownership—Local government rates and charges	1.759	
House price	4.708	
Repairs and maintenance	1.830	
Household equipment and operation—		
Fuel and light—Electricity	1.437	14.761
Gas	0.520	
Other fuel	0.278	
Furniture and floor coverings	3.222	
Appliances	1.909	
Drapery	1.077	
Household utensils and tools—Household utensils	1.017	
Tools	0.490	
Household supplies and services	3.319	
Postal and telephone services—Postal charges	0.341	
Telephone charges	1.151	
Transportation—		
Private transport—Motor vehicle purchase	5.523	18.453
Motor vehicle operation	10.788	
Public transport fares	2.142	
Tobacco and alcohol—		
Alcoholic beverages—Beer	4.769	10.247
Wine	1.180	
Spirits	1.052	
Cigarettes and tobacco	3.246	

Consumer Price Index
Composition and Weighting Pattern at September Quarter 1976 (a):
Six State Capital Cities Combined—continued

Group, section, etc.	Percentage weight	
	Section, etc.	Group
Health and personal care—		
Health services—Hospital and medical	0.889	3.950
Dental	0.595	
Personal care products	1.799	
Personal care services	0.667	
Recreation—		
Books, newspapers, magazines	1.428	7.878
Other recreation goods	3.215	
Holiday accommodation	0.921	
Other recreation services	2.314	
Total	100.000	100.000

(a) This weighting pattern is based on estimates of household expenditure for the year 1974-75, valued at September quarter 1976 prices; see Chapter 18 for details relating to the 1974-75 Household Expenditure Survey.

The weighting indicates the relative influence given to the various components in measuring the degree of price change in the index from the September quarter 1976 (i.e. from the beginning of the ninth linked series).

Comparison of the Linked Series: The Consumer Price Index is a chain of 'fixed weight aggregative' indexes, with significant changes in composition and weighting made at the linking dates.

The 1977 Year Book includes details relating to changes made at the following linking dates: June quarter 1952; June quarter 1956; March quarter 1960; December quarter 1963; December quarter 1968; and December quarter 1973. Subsequent changes were as follows:

The Eighth Linked Series was introduced from the September quarter 1974 when the item 'Radio and television licenses' was deleted. This series comprised the following groups and weighting pattern (percentage contributions to the total index): 'Food group', 26.0; 'Clothing and drapery group', 13.2; 'Housing group', 15.6; 'Household supplies and equipment group', 11.2; and 'Miscellaneous group', 34.0 per cent (all groups, 100.0 per cent).

The Ninth Linked Series was introduced from the September quarter 1976 and changed weights for all items. It is based on the results of the 1974-75 Household Expenditure Survey (see Chapter 18). The following items were added to the directly represented areas of expenditure: in the 'Food group'—meals out, fresh and frozen fish, oils and fats, cakes, fresh fruit and vegetables; in the 'Household equipment and operation group'—fertiliser, seeds, etc., insurance of dwellings and contents, travel goods, repairs to household goods; in the 'Transportation group'—motor vehicle comprehensive and third party property insurance, taxi and airfares, motor cycles; and in the 'Recreation group'—books, sound equipment, sports equipment, caravans, bicycles, toys, games, holiday accommodation, television hire, spectator admission, charges for sports services. A new group and sub-group structure, more consistent with international convention, has been adopted. The main changes were:

- (i) sub-division of the former 'Miscellaneous group' into four groups: 'Transportation', 'Health and personal care', 'Recreation' and 'Tobacco and alcohol';
- (ii) transfer of dry cleaning and shoe repairs to the 'Clothing group';
- (iii) transfer of postal and telephone services to the 'Household equipment and operation group'; and
- (iv) transfer of 'Drapery sub-group' from former 'Clothing and drapery group' to the 'Household equipment and operation group'.

As with previous series, the cost of land and interest charges on house purchases are not included in the new series.

The percentage contributions of the various groups to the total index are included in the last table.

Local weights for the individual cities are used for some items.

Consumer Price Index, Hobart

The Consumer Price Index for Hobart is compiled to base 1966-67=100.0, the number 100.0 being the base value for each of the major groups and also for the 'All groups' index (except for 'Health and personal care', base: December quarter 1968=100.0; and 'Recreation', base: September quarter 1976=100.0).

The following table shows group index numbers for Hobart on a financial year and quarterly basis (an annual index number is the average of the four respective quarterly index numbers):

Consumer Price Index: Hobart (a)
(Base of Each Index: Year 1966-67=100.0) (b)

Year or quarter	Food	Clothing	Housing	Household equipment and operation	Transportation	Tobacco and alcohol	Health and personal care	Recreation	All groups
1972-73	120.0	125.6	131.8	123.8	132.1	134.7	125.8	} n.a. {	126.7
1973-74	141.4	142.4	146.9	132.8	139.6	152.7	141.0		142.6
1974-75	158.6	171.8	180.9	156.4	165.3	169.4	174.1		166.7
1975-76 (c)	177.5	200.9	216.4	183.9	196.7	206.3	138.5		190.0
1976-77 (d)	201.5	232.5	244.9	201.8	220.7	222.0	250.3	103.6	217.7
1977-78	224.3	257.1	264.6	222.0	241.6	232.2	302.6	110.2	239.1
1974-75—									
March	158.1	174.0	186.0	161.0	168.1	172.1	180.8	} n.a. {	169.3
June	163.1	181.3	194.2	163.4	175.6	173.9	183.1		174.6
1975-76—									
Sept. (c)	168.8	186.1	199.7	167.1	181.2	182.8	125.5	} n.a. {	175.9
December	174.8	199.7	214.5	186.8	193.6	212.0	136.9		189.1
March	181.6	202.4	221.4	188.7	202.8	212.2	141.0		194.2
June	184.7	215.2	230.1	192.8	209.1	218.2	150.4		200.6
1976-77—									
September	192.0	218.5	235.5	196.2	215.2	218.9	153.4	100.0	205.5
Dec. (d)	200.4	231.8	244.0	198.5	217.7	220.9	277.0	102.1	217.2
March	204.0	235.4	247.7	203.3	223.3	220.5	283.4	105.4	221.4
June	209.7	244.1	252.5	209.3	226.6	227.6	287.3	106.9	226.7
1977-78—									
September	218.9	248.5	257.3	212.8	233.2	229.2	292.1	107.3	232.0
December	223.3	255.9	264.0	223.2	240.6	230.6	295.1	109.6	238.1
March	225.5	258.4	267.0	224.6	244.5	233.2	298.9	111.4	240.8
June	229.5	265.5	270.2	227.3	247.9	235.7	324.1	112.6	245.5

PERCENTAGE CHANGE: JUNE QUARTER 1978 OVER JUNE QUARTER 1977

	+9.4	+8.8	+7.0	+8.6	+9.4	+3.6	+12.8	+5.3	+8.3
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(a) Figures after the decimal point have limited significance; they are inserted to avoid the distortions that would occur in rounding.

(b) Except 'Health and personal care' (December quarter 1968 = 100.0) and 'Recreation' (September quarter 1976 = 100.0).

(c) The 'Health and personal care' and 'All groups' indexes affected by the introduction of Medibank and consequent reduction in net cost of medical services.

(d) The 'Health and personal care' and 'All groups' indexes include the effects of increases in prices for hospital and medical services associated with the changes to Medibank.

The following table shows the 'All groups' index number for Hobart, quarter by quarter, and also as averages for financial years:

Consumer Price Index: All Groups Index Numbers, Hobart (a)
(Base of Index: Year 1966-67 = 100.0)

Year	Quarter ending—				Average for year	
	September	December	March	June	Index	Percentage change (b)
1972-73	123.4	125.1	127.5	130.8	126.7	+5.7
1973-74	135.2	141.1	144.0	149.9	142.6	+12.5
1974-75	157.4	165.5	169.3	174.6	166.7	+16.9
1975-76	(c) 175.9	189.1	194.2	200.6	(c) 190.0	(c) +14.0
1976-77	205.5	(c) 217.2	221.4	226.7	(c) 217.7	(c) +14.6
1977-78	232.0	238.1	240.8	245.5	239.1	+9.8

PERCENTAGE CHANGE: 1977-78 QUARTER OVER CORRESPONDING 1976-77 QUARTER

(c) +12.9	+9.6	+8.8	+8.3
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(a) Figures after decimal point have limited significance. They are inserted to avoid the distortions that would occur in rounding.

(b) Over preceding year.

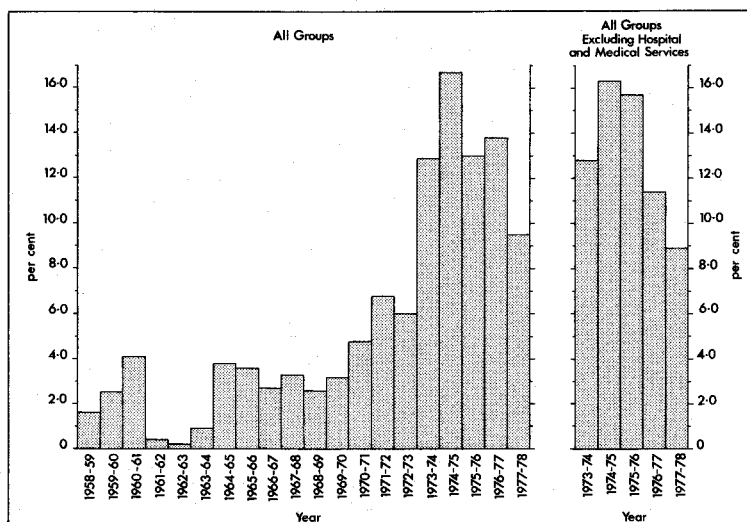
(c) See foot notes (c) and (d) to the previous table.

Consumer Price Indexes: Capital Cities

Six Capital Cities: A consumer price index series is constructed for each state capital city. These indexes measure price movements in each city individually (but do not provide a basis for the comparison of the retail price level in one city with that in any other city). The six capital cities Consumer Price Index is derived as the weighted average of the indexes for the individual cities, the basis of weighting being their populations as recorded at successive censuses.

The following graph shows the 'All groups' consumer price index for the six state capitals for the last 20 years and, for the last five years, the 'All groups excluding hospital and medical services' index.

**Consumer Price Index: Weighted Average of the Six State Capital Cities,
Percentage Increase Over Preceding Year**



The next table summarises index numbers and percentage changes for the 'All groups' consumer price index for the six state capital cities combined:

Consumer Price Index: All Groups
Australia—Six State Capital Cities (a): Summary
(Base of Index: Year 1966-67 = 100.0)

Quarter	Quarter		Percentage change from same quarter of preceding year	Calendar year (b)		Fiscal year (b)	
	Index number	Percentage change (c)		Index number	Percentage change (c)	Index number	Percentage change (c)
1973—							
September ...	139.6	+3.6	+10.6	137.3	+9.4	146.6 (1973-74)	+12.9
December ...	144.6	+3.6	+13.2	(1973)			
1974—							
March	148.1	+2.4	+13.6	158.1 (1974)	+15.1	171.1 (1974-75)	+16.7
June	154.1	+4.1	+14.4				
September ...	162.0	+5.1	+16.0	181.9 (1975) (d)	(d)+15.1	193.3 (1975-76) (d)	(d)+13.0
December ...	168.1	+3.8	+16.3				
1975—							
March	174.1	+3.6	+17.6	206.5 (1976) (e)	(e)+13.5	220.0 (1976-77) (e)	(e)+13.8
June	180.2	+3.5	+16.9				
September (d)	181.6	+0.8	+12.1	231.9 (1977)	+12.3	241.0 (1977-78)	+9.5
December (d)	191.7	+5.6	+14.0				
1976—							
March	197.4	+3.0	(d)+13.4	239.6			
June	202.4	+2.5	(d)+12.3				
September ...	206.9	+2.2	(d)+13.9	247.7			
December (e)	219.3	+6.0	+14.4				
1977—							
March	224.3	+2.3	(e)+13.6	242.7			
June	229.6	+2.4	(e)+13.4				
September ...	234.1	+2.0	(e)+13.1	247.7			
December ...	239.6	+2.3	+9.3				
1978—							
March	242.7	+1.3	+8.2				
June	247.7	+2.1	+7.9				

(a) Weighted average of six state capital cities combined.

(b) Calendar year and fiscal year index numbers are averages of the four respective quarterly index numbers.

(c) Over preceding period (year or quarter).

(d) Affected by the introduction of Medibank and the consequent reduction in the cost of hospital and medical services.

(e) Includes the effects of price increases in hospital and medical services associated with changes to Medibank.

The next table includes, details for the 'All groups excluding hospital and medical services' index. This facilitates the analysis of trends in retail prices by excluding the effects of the unusual changes in hospital and medical services for the September and December quarters of 1975 (following the introduction of Medibank) and for the December quarter 1976 (following changes to Medibank).

Consumer Price Index, Six State Capital Cities, Australia (a)
All Groups and All Groups Excluding Hospital and Medical Services

Quarter	All groups				All groups excluding hospital and medical services			
	Index number	Per-centage increase over preceding quarter	Equiv-alent annual rate (b) (per cent)	Per-centage increase over same quarter of previous year	Index number	Per-centage increase over preceding quarter	Equiv-alent annual rate (b) (per cent)	Per-centage increase over same quarter of previous year
1973—								
September	139.6	3.6	15.2	10.6	139.3	3.4	14.3	10.6
December	144.6	3.6	15.2	13.2	144.2	3.5	14.8	13.0
1974—								
March	148.1	2.4	10.0	13.6	147.7	2.4	10.0	13.4
June	154.1	4.1	17.4	14.4	153.9	4.2	17.9	14.3
September	162.0	5.1	22.0	16.0	161.7	5.1	22.0	16.1
December	168.1	3.8	16.1	16.3	167.6	3.6	15.2	16.2
1975—								
March	174.1	3.6	15.2	17.6	172.4	2.9	12.1	16.7
June	180.2	3.5	14.8	16.9	178.8	3.7	15.6	16.2
September	(c) 181.6	(c) 0.8	(c) 3.2	(c) 12.1	184.0	2.9	12.1	13.8
December	(c) 191.7	(c) 5.6	(c) 24.4	(c) 14.0	195.6	6.3	27.7	16.7
1976—								
March	197.4	3.0	12.6	(c) 13.4	201.3	2.9	12.1	16.8
June	202.4	2.5	10.4	(c) 12.3	206.3	2.5	10.4	15.4
September	206.9	2.2	9.1	(c) 13.9	210.8	2.2	9.1	14.6
December	(d) 219.3	(d) 6.0	(d) 26.2	(d) 14.4	216.8	2.8	11.7	10.8
1977—								
March	224.3	2.3	9.5	(d) 13.6	221.9	2.4	10.0	10.2
June	229.6	2.4	10.0	(d) 13.4	227.3	2.4	10.0	10.2
September	234.1	2.0	8.2	(d) 13.1	232.0	2.1	8.7	10.1
December	239.6	2.3	9.5	9.3	237.7	2.5	10.4	9.6
1978—								
March	242.7	1.3	5.3	8.2	240.6	1.2	4.9	8.4
June	247.7	2.1	8.7	7.9	45.0	1.8	7.4	7.8

(a) Weighted average of the six state capitals combined. Base year: 1966-67 = 100.0.

(b) Quarterly rate compounded over four quarters, e.g. 4.0 per cent per quarter is equivalent to 17.0 per cent p.a. ($1.04 \times 1.04 \times 1.04 \times 1.04 = 1.17$).

(c) Affected by the introduction of Medibank and the consequent reduction in the cost of hospital and medical services.

(d) Includes the effects of price increases in hospital and medical services associated with changes to Medibank.

Consumer (Retail) Price Indexes, Various Countries

The following table shows consumer (retail) price indexes for selected countries. It should be noted that the items priced and the weighting patterns used in constructing the indexes vary widely from country to country.

Consumer (Retail) Price Indexes: Various Countries (a)
(Source: Monthly Bulletin of Statistics of the Statistical Office of the United Nations)

Year	Australia (b)	France	Federal Repub. of Germany	Italy	Japan	New Zealand	Switz- erland	United King- dom	U.S.A.
INDEX NUMBERS (Base of each index: Year 1970 = 100.0)									
1972	112.3	112.0	111.1	110.8	110.9	118.0	113.7	117.2	107.7
1973	122.9	120.2	118.8	122.8	123.9	127.7	123.6	128.0	114.4
1974	141.5	136.3	127.1	146.3	154.2	141.9	135.7	148.4	127.0
1975	162.8	152.2	134.7	171.1	172.4	162.7	144.8	184.4	138.6
1976	184.8	166.9	140.8	199.8	188.4	190.2	147.3	214.9	146.6
1977	207.6	183.2	146.3	236.6	203.6	217.4	149.2	249.0	156.1

Consumer (Retail) Price Indexes: Various Countries (a)
(Source: Monthly Bulletin of Statistics of the Statistical Office of the United Nations)—continued

Year	Australia (b)	France	Federal Repub. of Germany	Italy	Japan	New Zealand	Switz- erland	United King- dom	U.S.A.
PERCENTAGE INCREASE OVER PREVIOUS YEAR									
1972.....	5.9	6.2	5.5	5.7	4.5	6.9	6.7	7.1	3.3
1973.....	9.4	7.3	6.9	10.8	11.7	8.2	8.7	9.2	6.2
1974.....	15.1	13.4	7.0	19.1	24.5	11.1	9.8	15.9	11.0
1975.....	15.1	11.7	6.0	17.0	11.8	14.7	6.7	24.3	9.1
1976.....	13.5	9.7	4.5	16.8	9.3	16.9	1.7	16.5	5.8
1977.....	12.3	9.8	3.9	18.4	8.1	14.3	1.3	15.9	6.5

(a) The items priced and the levels at which they are priced in these indexes vary widely from country to country.

(b) Consumer Price Index converted to base: Year 1970 = 100.0.

Average Prices of Foodstuffs, Hobart

The average retail prices of selected foodstuffs in Hobart since 1973 are shown in the next table. The list, while representative of foodstuffs commonly consumed, is not exhaustive; for a description of foodstuffs in the Consumer Price Index regimen, see the earlier table 'Consumer Price Index, Composition and Weighting Pattern'.

Average Retail Prices of Selected Food Items: Hobart (a)
(Cents)

Item	Unit	1973	1974	1975	1976	1977	
						Average price	Percentage increase (b)
Groceries, etc.—							
Bread, ordinary white, delivered	900 g	27.0	31.2	39.2	45.1	49.2	9.1
Flour, self-raising	1 kg	28.0	31.1	38.3	47.0	50.9	8.3
Tea	250 g	35.6	37.2	49.7	53.0	92.3	74.2
Coffee, instant	150 g	n.a.	n.a.	n.a.	159.2	283.2	77.9
Sugar	2 kg	47.9	48.0	52.4	56.7	63.5	12.0
Rice	500 g	19.5	22.7	26.5	31.7	35.5	12.0
Breakfast cereal, corn based	500 g	n.a.	(c) 56.0	60.6	66.3	71.5	7.8
Peaches, canned	822 g	35.2	42.9	51.5	64.3	69.8	8.5
Potatoes	1 kg	20.5	30.4	19.6	33.7	26.6	-21.1
Onions, brown	1 kg	39.5	37.7	34.8	43.4	47.3	9.0
Dairy produce, etc.—							
Butter	500 g	63.9	67.5	77.0	85.2	91.5	7.4
Cheese, processed	250 g	32.8	37.0	45.5	48.5	54.0	11.3
Margarine, table, poly-unsaturated	500 g	n.a.	(c) 70.5	78.7	78.1	84.9	8.7
Eggs	1 doz (55 g)	75.2	88.8	93.7	109.2	123.4	13.0
Bacon, rashers, pre-pack	250 g	57.6	75.6	91.9	111.6	123.0	10.2
Milk, fresh, bottled, delivered	2 × 600 ml	25.1	28.3	33.6	36.0	40.5	12.5
Meat—							
Beef—							
Rump steak	1 kg	271.4	319.7	287.0	323.4	354.7	9.7
Silverside, corned	1 kg	175.0	201.3	180.8	201.1	218.7	8.8
Lamb—							
Leg	1 kg	148.8	170.9	171.5	197.1	238.9	21.2
Loin chops	1 kg	149.3	174.8	173.1	198.2	240.0	21.1
Pork, Leg	1 kg	171.3	220.0	256.6	302.7	326.1	7.7

(a) The table units are not necessarily those for which the original price data were obtained; in such cases, prices have been calculated for the table unit.

(b) Over the corresponding average 1976 price.

(c) Average price for six months only.

Indexes of Relative Retail Prices of Food

The table below shows indexes of relative retail prices of food for the six state capitals, Canberra and Darwin, and for selected Tasmanian towns, as at March, for recent years. The indexes for each year are expressed to the base: weighted average of the six state capitals = 100. For a particular year, they show comparative retail prices based on the same selected 'basket' of food and grocery items and the same weighting pattern for each locality. The items priced for calculation of the indexes are generally those priced for the Monthly Food Index for March of the Consumer Price Index of the same year but excluding snacks and take-away foods (the annual *Indexes of Retail Prices of Food in Queensland Towns (6401.3)* published by the Queensland office of the Bureau lists the food items included for the year to which it relates). The indexes compare relative retail prices of food in various localities at each point in time; they do not show movement over time in each locality. Price data used for derivation of the indexes has been collected in special surveys of retail prices undertaken in March each year.

Index Numbers of Relative Retail Prices of Food Items (a)
(Base: weighted average of the six state capitals at each point of time=100)

City or town	At March							
	1971	1972	1973	1974	1975	1976	1977	1978
Sydney	101	100	100	101	102	101	99	98
Melbourne	99	100	101	99	97	98	99	99
Brisbane	103	103	101	102	100	101	101	101
Adelaide	96	97	98	99	101	102	103	102
Perth	103	101	98	96	103	101	102	105
Hobart	102	101	99	99	102	104	106	106
Canberra	105	104	106	105	104	105	105	103
Darwin	121	125	119	119	120	121		115
Launceston		100	97	98	97	100		102
Devonport		101	99	97	97	101		103
Burnie	n.a.	101	98	97	97	101	n.a.	104
Ulverstone		100	99	95	98	101		105
Queenstown		109	105	107	108	108		111
Scottsdale		99	99	100	103	104		106

(a) These indexes compare retail prices between various localities of a selected basket of food items at each point in time. They do not show movement over time in each locality.

The indexes are subject to the following limitations:

- (i) As the indexes are compiled by pricing, in each town or city, the same list of major food items, specified as to quantity and as far as possible as to quality, the comparisons measure relative retail prices only for the field covered by the selected items as combined by a common set of weights. They cannot be considered as reflecting relative prices in other fields of expenditure. A common list of items or 'basket' such as this *does not reflect differences in living costs which result directly from differences in modes of living*, e.g. as reflected by climate and availability of items, etc., or levels of living between localities. Users of these indexes should bear in mind that the degree of appropriateness of the items and weights used would vary from centre to centre, and that the differences in price levels as indicated by the indexes should be regarded as approximations only.
- (ii) In some instances, the relationship between towns in March of one year may differ from that existing between them at another date during that year or in other years, because seasonal influences on prices of some items e.g. potatoes and meat, may occur at different times in different localities. In these circumstances it is desirable to study the run of index numbers for a number of years.

Wholesale Price Indexes

General

The Bureau compiles several wholesale price indexes of basic materials. These include the 'Wholesale Price Index of Materials used in House Building' and the 'Wholesale Price Index of Materials used in Building other than House Building'. The *Price Index of Materials used in the Manufacturing Industry* (for Australia) was first published by the Bureau in July 1975 and the *Price Index of Articles produced by Manufacturing Industry* in October 1976.

Wholesale Price Index of Materials Used in House Building

General: This index is complementary to the 'Other than House Building' index and measures the change in prices of selected materials used in house construction.

Scope and Composition: The materials selected and weights given to the items were in accordance with the usage of materials in a sample of representative house types constructed in or about 1968-69. The house types included in the sample were those using brick, brick veneer, timber or asbestos-cement sheeting for the outer-walls. Within the four major construction types account was taken of a range of characteristics, e.g. material used for internal partitions, window frames, roofs, etc. The number of items included in the index range from 49 (Brisbane) to 51 (Perth). The items are combined into 11 groups; an 'All groups' index is also published. Standards are fixed and price movements are for items of a constant quality.

Derivation of Items and Weights: The index is a fixed weight index and is calculated by the method known as the 'weighted arithmetic mean of price relatives'. The items and weights used are based on the reported values of materials used in the selected houses in each state capital city urban area. Information about materials used and their value was obtained for a total of 114 houses. The material values derived for each state capital city were then used to develop weighting patterns for the individual cities and aggregated to give a weighting pattern for the six state capital cities combined. The next table gives the weighting pattern for the Hobart index.

Wholesale Price Index of Materials Used in House Building
Composition and Weighting Pattern: Hobart

Group	Percentage weight of group
Concrete mix, cement and sand	7.25
Cement products	7.01
Clay bricks, tiles, etc.	10.14
Timber, board and joinery	38.15
Steel products	7.49
Other metal products	7.93
Plumbing fixtures, etc.	2.74
Electrical installation materials	1.61
Installed appliances	6.98
Plaster and plaster products	4.99
Miscellaneous materials	5.71
Total	100.00

Base Period: The index has a base year 1966-67 = 100.0 but the weighting pattern is more appropriate to material usage during 1968-69.

Prices: Prices relate to specified standards for each commodity and are obtained in all state capital city urban areas from representative suppliers of materials used in house building. The prices are collected as at the mid-point of the month to which the index refers.

Index Numbers: The index has been compiled for each month from July 1966 and for financial years from 1966-67. Index numbers are published for each group and combined into an all groups number for each state capital city and the six state capital cities combined.

The following table compares movements in the index numbers for each of the six capital cities and six capitals combined for recent years. (The separate city indexes allow comparisons

to be drawn between capital city areas as to differences in the degree of price movement from period to period, but not as to differences in price levels.)

Wholesale Price Index of Materials Used in House Building
All Groups Index Numbers: Six State Capital Cities
(Base of Each Index: Year 1966-67 = 100.0)

Year or month	State capital cities						Six capitals (a)	
	Sydney	Mel-bourne	Brisbane	Adelaide	Perth	Hobart	Index number	Percentage change (b)
1972-73	135.6	126.5	133.8	134.8	126.9	130.8	131.1	+ 6.8
1973-74	158.0	147.8	152.2	157.2	141.8	145.5	151.3	+15.4
1974-75	189.4	178.4	187.0	195.4	172.4	179.1	183.4	+21.2
1975-76	211.1	200.1	218.5	222.5	201.9	209.2	208.1	+13.5
1976-77	234.5	223.6	243.5	250.7	229.8	235.1	232.9	+11.9
1977-78	254.1	238.6	265.1	270.7	253.4	256.7	252.0	+ 8.2
1977-78—								
September	249.7	234.9	260.5	267.0	249.5	252.7	248.0	+ 2.2
December	252.7	237.8	263.5	269.8	252.9	256.1	251.0	+ 1.2
March	256.6	241.6	269.1	273.3	257.2	260.9	255.1	+ 1.6
June	262.1	243.7	272.0	278.1	259.0	263.2	258.5	+ 1.3
PERCENTAGE CHANGE: JUNE 1978 OVER JUNE 1977								
	+ 7.3	+ 5.1	+ 7.4	+ 6.8	+ 7.1	+ 7.8	+ 6.6	..

(a) Weighted average of six state capital cities.

(b) Over preceding year or preceding month shown.

Index numbers for the Hobart capital city urban area for each group of items are given in the next table:

Wholesale Price Index of Materials Used in House Building
Group Index Numbers: Hobart
(Base of Each Index: Year 1966-67 = 100.0)

Year or month	Concrete mix, cement and sand	Cement products	Clay bricks, tiles, etc.	Timber, board and joinery	Steel products	Other metal products
1972-73	130.7	137.2	140.2	134.6	135.9	118.1
1973-74	139.8	147.3	159.2	154.2	150.8	130.9
1974-75	157.6	178.6	201.0	192.5	188.7	160.2
1975-76	184.9	205.9	244.0	226.6	224.2	181.8
1976-77	205.0	231.6	272.1	257.4	254.7	201.4
1977-78	219.5	253.0	306.4	282.3	279.2	218.4
1976-77—						
September	202.8	228.6	271.5	250.7	247.9	198.2
December	204.9	232.5	272.5	256.0	253.4	199.8
March	208.1	233.1	272.5	265.0	260.2	201.1
June	209.2	235.8	283.9	269.0	263.8	211.9
1977-78—						
September	215.6	252.8	293.5	280.0	273.0	214.7
December	219.6	254.6	307.4	280.2	281.8	219.5
March	221.8	254.8	313.4	287.7	284.2	220.9
June	227.5	256.5	318.7	287.9	285.3	222.7
PERCENTAGE CHANGE: JUNE 1978 OVER JUNE 1977						
	+ 8.7	+ 8.8	+ 12.3	+ 7.0	+ 8.2	+ 5.1

Wholesale Price Index of Materials Used in House Building
Group Index Numbers: Hobart—continued
(Base of Each Index: Year 1966-67 = 100.0)

Year or month	Plumbing fixtures, etc.	Electrical installation materials	Installed appliances	Plaster and plaster products	Miscellaneous materials	All groups	
						Index number	Percentage change (a)
1972-73	136.8	126.0	107.6	114.2	132.5	130.8	+8.4
1973-74	145.5	146.8	115.3	119.2	141.9	145.5	+11.2
1974-75	173.2	162.4	130.3	157.0	178.6	179.1	+23.1
1975-76	202.2	174.6	136.9	188.3	204.8	209.2	+16.8
1976-77	228.2	191.8	148.0	202.2	234.0	235.1	+12.4
1977-78	247.4	201.2	154.9	218.2	250.8	256.7	+9.2
1976-77—							
September	221.0	187.3	144.1	194.8	229.9	230.2	+3.0
December	230.0	185.0	149.2	196.1	232.5	234.0	+1.7
March	234.1	195.5	150.5	211.0	238.6	239.8	+2.5
June	233.5	200.2	150.9	211.1	241.0	244.1	+1.8
1977-78—							
September	242.7	194.6	152.7	215.9	245.9	252.7	+3.5
December	248.2	201.5	153.6	217.2	248.2	256.1	+1.3
March	251.4	200.9	156.1	219.4	255.7	260.9	+1.9
June	252.4	209.3	159.3	225.0	259.3	263.2	+0.9
PERCENTAGE CHANGE: JUNE 1978 OVER JUNE 1977							
	+8.1	+4.5	+5.6	+6.6	+7.6	+7.8	..

(a) Over preceding year or preceding month shown.

Wholesale Price Index of Materials Used in Building Other than House Building

General: This was the first of a series of indexes designed to replace the obsolete Wholesale Price (Basic Materials and Foodstuffs) Index. The index measures changes in the prices of selected materials used in the construction of buildings other than houses and 'low-rise' flats (in general, those up to three storeys).

Prices: Price series used relate to specified standards of each commodity and are obtained in all state capital city urban areas from representative supplies of materials used in building. In the main they are collected as at the mid-point of the month to which the index refers, or as near thereto as practicable. There are some exceptions to the use of local prices in the indexes for each capital city area. In a few cases where suitable price series are not currently available for an item in a given city, imputation is necessary. For each capital city area, the whole of the group 'electrical installation materials' and the majority of the items in the group 'mechanical services components' are based on Sydney and Melbourne price series.

Base Period: The reference base of the index is the year 1966-67 = 100.0 The index is a fixed-weights index and is calculated by the method known as the 'weighted arithmetic mean of price relatives'.

Scope and Composition: Composition of the index is in accordance with actual material usage in building projects which were selected as being representative for purposes of determining weighting patterns. Completed values of the types of buildings selected constituted 86 per cent of all completed new buildings other than houses and low-rise flats in the period 1964-65 to 1966-67. Buildings for entertainment, recreation and religious purposes together with buildings in the building statistics category 'miscellaneous buildings' are not directly represented.

The index comprises 72 items combined into 11 groups. Items are described in terms of fixed specifications with the aim of recording price changes for representative materials of constant quality. The group weighting pattern is given in the next table:

**Wholesale Price Index of Materials Used in Building Other Than House Building
Composition and Weighting Pattern**

Group	Percentage weight of group
Concrete mix, cement, sand, etc.	10.41
Cement products	3.64
Bricks, stone, etc.	5.28
Timber, board and joinery	11.90
Steel and iron products	30.58
Aluminium products	6.01
Other metal products	2.59
Plumbing fixtures	1.19
Miscellaneous materials	7.09
Electrical installation materials	8.61
Mechanical services components	12.70
Total	100.00

Index Numbers: The index has been compiled for each month from July 1966, and for financial years from 1966-67.

**Wholesale Price Index of Materials Used in Building Other Than House Building
All Groups Index Numbers: Six State Capital Cities
(Base of Each Index: Year 1966-67 = 100.0)**

Year or month	State capital cities						Six capitals (a)	
	Sydney	Mel- bourne	Brisbane	Adelaide	Perth	Hobart	Index number	Percent- age change (b)
1972-73	127.2	131.2	130.4	129.8	126.3	129.7	128.9	+ 4.8
1973-74	144.1	148.0	149.0	145.8	142.9	143.8	145.8	+13.1
1974-75	176.0	180.6	186.6	181.0	176.7	179.3	179.2	+22.9
1975-76	199.0	209.4	216.3	210.4	208.3	210.4	206.2	+15.1
1976-77	221.5	234.8	241.2	234.3	235.4	234.8	230.3	+11.7
1977-78	239.9	254.4	260.9	254.2	258.3	253.7	249.7	+ 8.4
1976-77—								
September	214.8	228.5	235.0	228.7	227.9	229.2	223.9	+ 1.6
December	220.0	234.1	240.7	233.3	234.3	234.6	229.3	+ 2.4
March	227.1	239.5	246.0	238.5	242.2	239.1	235.5	+ 2.7
June	230.0	243.8	249.3	242.2	245.0	234.4	238.9	+ 1.4
1978-78—								
September	234.7	249.2	256.2	249.2	253.4	249.6	244.7	+ 2.4
December	239.3	254.3	260.6	253.8	258.1	253.9	249.4	+ 1.9
March	243.2	257.7	264.1	257.8	261.4	256.4	252.9	+ 1.4
June	248.3	262.1	268.8	262.6	266.9	260.7	257.8	+ 1.9

PERCENTAGE CHANGE: JUNE 1978 OVER JUNE 1977

	+8.0	+7.5	+7.8	+8.4	+8.9	+11.2	+7.9	..
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(a) Weighted average of six state capital cities.

(b) Over preceding year or preceding month shown.

The separate city indexes measure price movements within each metropolitan area individually. They enable comparisons to be drawn between metropolitan areas as to differences in degree of price movement from period to period, but not as to differences in price level. The six state capitals combined index is a weighted average of the individual

indexes for each city, weighted on the basis of estimated value on completion of building other than house building in the separate states over a fixed period.

Index numbers for the Hobart urban area for each group of items are given in the following table:

Wholesale Price Index of Materials Used in Building Other Than House Building Group Index Numbers: Hobart
(Base of Each Index: Year 1966-67=100.0)

Year or month	Concrete mix cement, sand, etc.	Cement products	Bricks, stone, etc.	Timber, board and joinery	Steel and iron products	Aluminium products
1972-73	130.3	138.4	130.1	134.3	133.6	111.8
1973-74	139.3	149.3	150.0	154.6	148.7	117.3
1974-75	157.5	179.5	197.6	191.2	195.0	149.1
1975-76	185.3	207.8	238.1	222.4	236.9	176.2
1976-77	206.2	236.5	262.6	249.5	262.9	199.0
1977-78	220.9	258.8	290.6	269.8	282.1	218.4
1976-77—						
September	203.7	231.9	260.3	242.9	256.9	196.2
December	205.8	237.2	262.4	249.2	263.9	197.0
March	209.6	238.8	264.5	256.5	266.7	200.6
June	211.0	244.3	273.9	259.9	271.1	209.8
1977-78—						
September	217.1	255.8	282.0	266.8	278.4	219.2
December	220.8	259.2	293.5	267.7	283.6	218.8
March	223.3	260.6	292.5	274.2	284.3	219.3
June	228.9	265.6	297.3	276.0	287.8	224.3

PERCENTAGE CHANGE: JUNE 1978 OVER JUNE 1977

	+8.5	+8.7	+8.5	+6.2	+6.2	+6.9
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Wholesale Price Index of Materials Used in Building Other Than House Building Group Index Numbers: Hobart—continued

(Base of Each Index: Year 1966-67=100.0)

Year or month	Other metal products	Plumbing fixtures	Miscellaneous materials	Electrical installation materials (a)	Mechanical services components (a)	All groups	
						Index number	Percentage change (b)
1972-73	126.7	142.9	120.2	120.5	132.1	129.7	+5.8
1973-74	150.1	154.0	129.1	138.3	143.5	143.8	+10.9
1974-75	168.8	189.4	161.1	157.4	181.3	179.3	+24.8
1975-76	176.5	221.6	188.1	177.4	201.7	210.4	+17.3
1976-77	193.4	246.5	209.9	199.6	226.3	234.8	+11.6
1977-78	206.3	259.0	225.5	215.3	247.8	253.7	+8.0
1976-77—							
September	190.4	240.3	204.5	193.1	217.4	229.2	+2.4
December	192.2	248.1	209.2	195.7	227.4	234.6	+2.4
March	193.8	251.2	214.3	206.6	232.1	239.1	+1.9
June	199.7	253.4	217.0	207.9	237.6	243.4	+1.8
1977-78—							
September	202.3	254.9	221.1	209.1	242.1	249.6	+2.5
December	208.6	260.2	224.4	215.3	246.5	253.9	+1.7
March	209.1	261.7	230.0	216.9	251.8	256.4	+1.0
June	209.6	263.3	232.6	225.0	257.0	260.7	+1.7

PERCENTAGE CHANGE: JUNE 1978 OVER JUNE 1977

	+5.0	+3.9	+7.2	+8.2	+8.2	+7.1	..
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(a) The whole of the group 'Electrical installation materials' and the majority of items in the group 'Mechanical services components' are based on Melbourne and Sydney price series.

(b) Over preceding year or preceding month shown.

Australian Export Price Index

This index has fixed weights, its purpose being to provide monthly comparisons over a limited number of years of the level of export prices of the selected items, making no allowance for variations in quantities exported. The index numbers are thus measures of price change only. The price series used in the index relate to specific standards for each commodity and in most cases are combinations of prices for a number of representative grades, types, etc. For some commodities, price movements in the predominant market, or markets, are used, while for other commodities average realisations in all export markets are used. As nearly as possible, prices used are on the basis of f.o.b. at the main Australian ports of export.

Export Price Index Numbers: Australia
(Base of Each Index: Year 1959-60=100)

Year or month	Wool	Meats	Dairy produce	Cereals	Dried and canned fruits
1972-73	179	178	119	102	106
1973-74	172	201	109	184	152
1974-75	121	132	127	256	176
1975-76	127	150	122	240	162
1976-77	164	169	128	219	184
1977-78	168	212	147	196	237
1976-77—					
September	147	147	119	224	154
December	180	167	130	219	171
March	174	183	135	209	188
June	167	191	141	206	241
1977-78—					
September	164	189	147	189	242
December	167	199	147	191	244
March	170	227	148	197	241
June	173	246	147	216	223

Export Price Index Numbers: Australia—continued
(Base of Each Index: Year 1959-60=100)

Year or month	Sugar	Hides and tallow	Metals and coal (a)	Gold	All groups (b)	
					Index	Percentage change (c)
1972-73	136	139	142	180	134	+28.8
1973-74	176	161	196	289	160	+19.4
1974-75	378	141	263	391	181	+13.1
1975-76	335	151	286	359	187	+3.3
1976-77	314	203	330	370	206	+10.2
1977-78	273	224	340	472	213	+3.4
1976-77—						
September	316	185	307	289	192	-2.5
December	310	194	345	414	213	+10.9
March	317	214	346	434	213	+0.0
June	313	245	341	415	214	+0.5
1977-78—						
September	295	228	340	433	210	-1.9
December	254	201	345	457	209	-0.5
March	267	225	339	515	214	+2.4
June	285	244	337	522	222	+3.7

(a) Does not include iron ore, bauxite, alumina and mineral sands.

(b) In addition to the specified groups, 'All groups index' includes iron ore, bauxite, alumina and mineral sands.

(c) Over preceding year or preceding month shown.

The index numbers shown in the preceding table are based on the value of exports in 1969-70 and form part of an interim series which has been published since June 1969. The interim series will not be published until a comprehensive review and rebasing of the index is

completed. The 'All groups' index in the interim series includes the items iron ore, bauxite, alumina and mineral sands (these items were excluded from the index prior to June 1969) which are not included in the relevant sub-group, 'Metals and coal'.

Price Indexes and Inflation

There is no practical means available for *directly and precisely* measuring the rate of inflation, as this would entail regular measurement of both the price and volume of *all* goods and services sold and an ability to take into account constantly changing standards, qualities and types of these goods and services. However, price indexes, although not a true measure of inflation, are often used as giving the best available rough indication of the rate of inflation.

When a rate of inflation is stated for a particular country, the rate of increase in the official retail price index has usually been quoted. However, any such measure actually relates only to purchasing power with respect to the 'Basket' of items in the particular index used, combined in their specified proportions. Retail price indexes *do not* measure changes in raw material prices, wholesale prices, industrial plant and equipment costs, etc., and, therefore, cannot be regarded as measuring the trend in the overall internal price structure of an economy (i.e. the rate of inflation).

For a more detailed coverage of this topic, see the article under the above heading in the 1976 *Year Book* (a table showing the effect of various constant rates of price increase if compounded over a number of years is included). The table below shows, for recent years, the varying results obtained when different price index series are used as a measure of the change in prices and of purchasing power:

Selected Price Indexes: Comparison

Year	Consumer price index (a)			Price index of materials used in—			Australian G.D.P. implicit price deflator (c) r
	Hobart, all groups	Six state capitals combined		House building, Hobart (a)	Manufacturing industry, Australia (b)		
		All groups	Excluding hospital and medical services		Imported materials	All groups	
INDEX NUMBERS							
1973-74	142.6	146.6	146.3	145.5	127.1	134.7	84.8
1974-75	166.7	171.1	170.1	179.1	181.5	145.1	100.0
1975-76	190.0	193.3	196.8	209.2	202.9	158.6	114.5
1976-77	217.7	220.0	219.2	235.1	233.2	182.1	127.3
1977-78	239.1	241.0	238.8	256.7	p 257.0	p 198.6	137.4
PERCENTAGE INCREASE OVER PRECEDING YEAR							
1973-74	12.5	12.9	12.8	11.2	20.8	18.3	14.6
1974-75	16.9	16.7	16.3	23.1	42.8	7.7	17.9
1975-76	14.0	13.0	15.7	16.8	11.8	9.3	14.5
1976-77	14.6	13.8	11.4	12.4	14.9	14.8	11.1
1977-78	9.8	9.5	8.9	9.2	p 10.2	p 9.1	7.9
PRICE (d) OF AN ARTICLE WORTH \$100 IN 1973-74 IF ITS PRICE INCREASED AT THE SAME RATE AS THE RESPECTIVE PRICE INDEX (\$)							
1973-74	100.00	100.00	100.00	100.00	100.00	100.00	100.00
1974-75	116.90	116.71	116.27	123.09	142.80	107.72	117.92
1975-76	133.24	131.86	134.52	143.78	159.64	117.74	135.02
1976-77	152.66	150.07	149.83	161.58	183.48	135.19	150.12
1977-78	167.67	164.39	163.23	176.43	202.20	147.44	162.03

Selected Price Indexes: Comparison—continued

Year	Consumer price index (a)			Price index of materials used in—			Australian G.D.P. implicit price deflator (c) r
	Hobart, all groups	Six state capitals combined		House building, Hobart (a)	Manufacturing industry, Australia (b)		
		All groups	Excluding hospital and medical services		Imported materials	All groups	
VALUE OF A \$1 NOTE EXPRESSED IN TERMS OF 1973-74 VALUES IF THE RESPECTIVE PRICE INDEX IS TAKEN AS A MEASURE OF INFLATION (\$)							
1973-74	1.00	1.00	1.00	1.00	1.00	1.00	1.00
1974-75	0.86	0.86	0.86	0.81	0.70	0.93	0.85
1975-76	0.75	0.76	0.74	0.70	0.63	0.85	0.74
1976-77	0.66	0.67	0.67	0.62	0.55	0.74	0.67
1977-78	0.60	0.61	0.61	0.57	0.49	0.68	0.62

VALUE OF A \$1 NOTE EXPRESSED IN TERMS OF 1973-74 VALUES IF THE RESPECTIVE PRICE INDEX IS TAKEN AS A MEASURE OF INFLATION (\$)

(a) Base of each index: year 1966-67=100.0.

(b) Base of each index: year 1968-69=100.0.

(c) Index based on estimates of Australian Gross Domestic Product at current prices and at average 1974-75 prices available in September 1978, not a fixed weights index (see 'Implicit Price Deflators' in the section on Australian National Accounts in Chapter 18).

(d) Average price of the article during a particular year; these figures (rounded) can also be used as the respective indexes to the new base: year 1973-74=100.0.

Calculation of Price Index Series for Particular Purposes

Special purpose index series are often useful. For example, an index of average weekly earnings for Tasmania, base year 1971-72=100.0, may be useful in relation to the costs of a large construction program commenced in that year; an office rental rate may be adjusted regularly according to movements in the consumer price index from the date of commencement of the leasing agreement.

Calculation of a special purpose price index series based on values (or index numbers) available for a series of years is easily carried out as follows: Choose the base year and let the index number for that year equal 100.0; then the index number for any other year equals—

$$\frac{\text{value for that year}}{\text{value for the base year}} \times \frac{100.0}{1}$$

As examples, price index series with base year 1972-73 = 100.0, have been calculated from the following series: (i) average weekly earnings per employed male unit, Tasmania; and (ii) the consumer price index, all groups, for Hobart. The results are set out below:

Average Weekly Earnings Index and Consumer Price Index

Particulars	1972-73	1973-74	1974-75	1975-76	1976-77	1977-78
Average weekly earnings, Tasmania—						
Amount	\$ 95.20	110.50	140.20	157.80	181.20	199.00
Index of, base year 1972-73 = 100.0	100.00	116.07	147.27	165.76	190.34	209.03
Percentage increase (a)	8.8	16.1	26.9	12.6	14.8	9.8
Consumer price index (b)—						
Base year 1966-67 = 100.0	126.7	142.6	166.7	190.0	217.7	239.1
Base year 1972-73 = 100.0	100.0	112.5	131.6	150.0	171.8	188.7
Percentage increase (a)	5.7	12.5	16.9	14.0	14.6	9.8

(a) Over preceding year.

(b) All groups, Hobart.

Using a Price Index Series

If a *relevant* price index is available, a *current value* series may be readily adjusted to values at *constant prices* relative to any base year desired, in order to allow a more realistic assessment of trends over time.

For example, the year *n* value, at year *m* constant prices

$$= \frac{\text{current value for year } n}{1} \times \frac{\text{price index for year } m}{\text{price index for year } n}$$

If it was desired to convert a current value of \$100 m in 1976-77 to constant 1972-73 values based on the Hobart all groups consumer price index (see the last table for index numbers), the calculations would be as follows:

$$\text{Value at 1972-73 prices} = \$100\text{m} \times \frac{126.7}{217.7}$$

$$= \$58.2\text{m}$$

$$(\text{Or, alternatively, } \$100\text{m} \times \frac{100.0}{171.8} = \$58.2\text{m})$$

WAGES

Basic Wage in Tasmania

General

The present position is as follows: wages fixed by Tasmanian State Industrial Boards still consist of two parts, namely a *basic wage* and a *margin*; wages fixed by the Federal Conciliation and Arbitration Commission are expressed as a *total wage*, the basic wage concept having been abolished in federal awards in 1967. All state industrial authorities with the exception of Victoria's have retained the basic wage concept. A more detailed history of the basic wage can be found in the 1970 *Year Book*.

State Basic Wage Rates

The following table shows the awards and determinations made by Tasmanian industrial authorities after the basic wage was abolished in federal awards in June 1967:

Tasmanian Basic Wage Rates Prior To and After Abolition of Federal Basic Wage (\$)

Date of operation (a)	Adult males	Adult females	Date of operation (a)	Adult males	Adult females
1967 1 July	34.40	26.05	1976 15 May	58.20	58.20
1968 25 October	35.70	27.40	1976 15 August	60.70	60.70
1969 19 December	36.80	28.20	1976 22 November	62.90	62.90
1971 1 January	39.00	29.90	1977 31 March	68.60	68.60
1972 19 May	41.00	31.90	1977 24 May	69.90	69.90
1973 29 May	43.50	34.40	1977 22 August	71.30	71.30
1974 23 May	46.00	36.90	1977 12 December	72.40	72.40
1975 15 May	47.70	38.20	1978 28 February	73.50	73.50
1975 18 September	50.00	50.00	1978 7 June	74.50	74.50
1976 15 February	54.40	54.40			

Minimum Wages

Tasmanian Industrial Boards introduced the concept of the minimum wage into their determinations in June 1967. Weekly minimum wage rates prescribed in federal and State awards for recent years are shown in the following table:

Minimum Wages, Adult Males: Federal and State Awards
(\$)

Date operative (a)	Federal awards	Tasmanian State Industrial Boards determinations
1 January 1975	76.70	76.70
15 May 1975	80.70	80.70
18 September 1975	83.50	83.50
15 February 1976	88.80	88.80
1 April 1976	93.80	93.80
15 May 1976	96.60	97.60
15 August 1976	99.10	100.10
22 November 1976	101.30	102.30
31 March 1977	107.00	108.00
24 May 1977	109.00	110.10
22 August 1977	111.20	112.30
12 December 1977	112.90	114.00
28 February 1978	114.60	115.70
7 June 1978	116.10	117.20

(a) Rates operative from the first pay-period commencing on or after the date shown.

The Federal Conciliation and Arbitration Commission announced in its decision of 8 July 1966 that it intended to grant relief to low wage earners by inserting a provision prescribing a minimum wage. It ordered that the minimum male wage paid under the Metal Trades Award should be the appropriate basic wage plus \$3.75 a week (e.g. in Tasmania a basic wage of \$33.40 plus \$3.75 giving a minimum wage of \$37.15).

Total Wage Concept

For a full account of events leading to the adoption of a 'total wage' concept see the 1970 *Year Book*. The decision abolishing the basic wage in awards of the Federal Conciliation and Arbitration Commission, was handed down in June 1967 when a \$1.00 increase was awarded, to be added to the *total wage*. Results of recent national wage cases prior to the adoption of wage indexation principles in April 1975 follow:

- 1973** The total wage was increased by a combination of a two per cent increase plus a flat increase of \$2.50. The minimum wage was increased by \$9.00 per week.
- 1974** The Arbitration Commission again increased total award rates by a combination of a two per cent increase plus a flat rate increase of \$2.50. The minimum wage was increased by \$8.00 per week.
- 1975** Total wages were increased by 3.6 per cent in line with the movement of the Consumer Price Index during the March quarter 1975. The minimum wage was increased by \$8.00 per week, effective from 1 January 1975, and by a further \$4.00 when trial indexation was introduced.

Total Wage concept in Tasmania

The Federal award of June 1967 was followed by a test case argued before the Chairman of the State Industrial Boards. The employers asked for adoption of the total wage concept. The unions opposed this and argued for a \$7.30 increase in the basic wage; if a lesser amount was determined, then a *minimum total wage* of \$40.70 should nevertheless be fixed.

The following table shows recent determinations made by the State Industrial Boards:

Tasmania: State Industrial Boards Determinations

Date (a)	Basic wage		Minimum wage	
	Increase	Total	Increase	Total
	\$	\$	\$	\$
May 1976	3.80	58.20	3.80	97.60
August 1976	2.50	60.70	r 2.20	99.80
November 1976	2.20	62.90	r 2.50	102.30
March 1977	5.70	68.60	5.70	108.00
May 1977	r 1.30	69.90	r 2.10	110.10
August 1977	r 1.40	71.30	r 2.20	112.30
December 1977	1.10	72.40	1.70	114.00
February 1978	1.10	73.50	1.70	115.70
June 1978	1.00	74.50	1.50	117.20

(a) Determination effective during this month.

The decision in the test case (Electrical Trades) was that both male and female rates should be increased by \$1; the increase, however, should be regarded as *raising the basic wage* which would be retained for the present in State determinations. The State Industrial Boards have retained the basic wage and margins concepts in awards handed down following subsequent national wage case determinations of the Federal Conciliation and Arbitration Commission.

State Industrial Boards Decisions, 1977: Meetings of all industrial boards were convened to determine variations to the State basic wage and minimum wage following National Wage Case hearings during 1976 and 1977. Representatives from the Tasmanian Employers' Federation and the Tasmanian Trades and Labour Council appeared at the hearings which were held under the 'common rule' provisions of the *Industrial Relations Act, 1975*.

National Wage Case Decisions

The Conciliation and Arbitration Commission began hearing submissions regarding wage indexation subsequent to the publication of the June Quarter 1975 Consumer Price Index. Submissions were made by the Federal Government, state governments, tribunals, private employers and trade unions. The Commission also sat to consider whether subsequent increases should be awarded, in line with the principles of wage indexation, following publication of the Consumer Price Index for each quarter.

The following table shows the increases made by the Conciliation and Arbitration Commission in National Wage Case decisions from May 1975:

General Increases in award Total Wages: National Wage Cases Decisions

Date operative (a)	Increase
1975—15 May	3.6 per cent
18 September	3.5 per cent
1976—15 February	6.4 per cent
15 May	3.0 per cent (b)
15 August	1.5 per cent (c)
22 November	2.2 per cent
1977—31 March	\$5.70 per week
24 May	1.9 per cent (d)
22 August	2.0 per cent
12 December	1.5 per cent
1978—28 February	1.5 per cent (e)
7 June	1.3 per cent

(a) Operative from the beginning of the first pay-period commencing on or after the date shown.

(b) Increase three per cent up to a maximum of \$3.80 a week.

(c) \$2.50 for wage rates up to \$166 per week. 1.5 per cent for wage rates over \$166 per week.

(d) Increase 1.9 per cent up to a maximum of \$3.80 a week.

(e) Increase 1.5 per cent up to a maximum of \$2.60 per week.

Wage Fixation Principles*Introduction*

In April 1975, the Federal Conciliation and Arbitration Commission adopted the principle of wage indexation based upon quarterly movements in the Consumer Price Index. At that time the Commission established certain principles in relation to its quarterly indexation decisions. Over the first three years that indexation cases operated, the Commission expressed concern about the viability and future of the system. In its National Wage Decision of May 1977, the Commission commented on problems relating to principles of wage fixation. The Commission also announced that a conference would be called on 25 May 1977 to discuss these problems. The conference, held in private, was conducted between 25 May 1977 and 31 April 1978. The purpose of the conference was to achieve consensus in as many areas of wage fixation as possible. The organisations represented at the conference were: The Australian Council of Trade Unions; The Council of Australian Government Employee Organisations; The Australian Council of Salaried and Professional Associations; The Australian Public Service Federation; National Employers' Policy Committee; The Master Builders' Federation of Australia; the Commonwealth Government; each State Government; and the Australian Public Service Board. The conference and its report formed the basis for the September 1978 decision on wage fixation principles.

The President, Sir John Moore, handed down the Commission's decision on wage fixation principles on 14 September 1978. In announcing these principles Sir John emphasised that a prime consideration in making future awards would be whether there had been substantial compliance with the principles. The Commission also decided that the principles should continue to operate until 31 December 1979. It stated that all parties should meet to decide on a system to operate from 1 January 1980. To achieve this the Commission would call a conference towards the end of 1979.

Principles of Wage Determination

The Arbitration Commission stated that in making determinations it would guard against any contrived arrangement that would circumvent the wage fixation principles. The principles announced by the Commission on 14 September 1978, to apply to wage fixation up until 31 December 1979, are set out below:

- '1. The Commission will adjust its award wages and salaries every six months in relation to the last two quarterly movements of the six-capitals CPI unless it is persuaded to the contrary by those seeking to oppose the adjustment.
- '2. For this purpose, the Commission will sit in October and April following the publication of the CPI for the September and March quarters respectively. We expect the time of such hearings to be short.
- '3. Any adjustment in wage and salary award rates on account of the CPI for the six-month period will, if practicable, operate from the beginning of the first pay-period commencing on or after the 15th of the month following the issue of the September quarter CPI in one case and the March quarter CPI in the other.
- '4. The form of indexation will be uniform percentage adjustment unless the Commission decides otherwise in the light of exceptional circumstances. It is to be understood that the compression of relativities which has occurred in awards in recent years does not provide grounds for special wage increases to correct the compression.
- '5. No wage adjustment on account of the CPI will be made in any six month period unless the movement in that six-month period was at least 1 per cent. Movement in any six-month period of less than 1 per cent will be carried forward to the following six-month period or periods and an adjustment will occur when the accumulated movement equals 1 per cent or more.
- '6. Each year the Commission will consider what increase in total wage or changes in conditions of employment should be awarded nationally on account of productivity. No hearing under this principle will commence before October 1979.
- '7. In addition to the above increases, the only other grounds which would justify increases in wages or salaries are:

7. (a) *Changes in work value*

Changes in work value being changes in the nature of the work, skill and responsibility required, or the conditions under which the work is performed. This would normally apply to some classifications in an award although in rare cases it might apply to all classifications.

- (i) *Prima facie* the time from which work value changes should be measured, is the last movement in the award rates concerned apart from National Wage and Indexation. That *prima facie* position can only be rebutted if a party demonstrates special circumstances and even then changes can only go back only to 1 January 1970.
- (ii) Changes in work by themselves may not lead to changes in the value of work. The change should constitute a significant net addition to work requirements to warrant a wage increase.
- (iii) Where it has been demonstrated that a change has taken place in accordance with the principles, an assessment will have to be made as to how that change should be measured in money terms.
- (iv) The expression 'the conditions under which the work is performed' relates to the environment in which the work is done.
- (v) Re-classification of existing jobs is to be determined in accordance with this principle.

7. (b) *Catch-up of community movements*

As a result of a series of industry wage increases in 1974 a firm base has been widely established with appropriate relativities between and within awards on which indexation can be applied. However, there may be some cases where awards have not been considered in the light of the community movements in 1974. These cases may be reviewed to determine whether for that reason they would qualify for a wage increase, but care must be exercised to ensure that they are genuine catch-up cases and not leap-frogging.

- (i) This principle refers to only one community and not to a plurality of communities.
- (ii) The \$24 awarded in the Metal Industry Award should not simply be converted into a percentage and applied throughout a wage and salary scale.
- (iii) Paid rates awards should not be accorded increases for 1974 which differ from those granted in minimum rates awards, nor is it relevant to compare minimum rates with paid rates.

Any application under this Principle must be lodged before 31 December 1978.

7. (c) *Anomalies*

The resolution of anomalies and special and extraordinary problems, by means of the Conference already established to deal with anomalies, and in accordance with the procedures laid down for them.

7. (d) *Inequities*

(1) The resolution of inequities existing where employees performing similar work are paid dissimilar rates of pay without good reason. Such inequities shall be processed through the Anomalies Conference and not otherwise, and shall be subject to all the following conditions:

- (i) The work in issue is similar to the other class or classes of work by reference to the nature of the work, the level of skill and responsibility involved and the conditions under which the work is performed.
- (ii) The classes of work being compared are truly like with like as to all relevant matters and there is no good reason for dissimilar rates of pay.
- (iii) In addition to similarity of work, there exists some other significant factor which makes the situation inequitable. An historical or geographical nexus between the similar classes of work may not of itself be such a factor.

- (iv) The rate of pay fixed for the class or classes of work being compared with the work in issue, is a reasonable and proper rate of pay for the work and is not vitiated by any reason such as an increase obtained for reasons inconsistent with these guidelines as a whole.
- (v) Rates of pay in minimum rate awards are not to be compared with those in paid rate awards.

(2) In dealing with inequities, the following over-riding considerations shall apply:

- (i) The pay increase sought must be justified on the merits.
 - (ii) There must be no likelihood of flow-on.
 - (iii) The economic cost must be negligible.
 - (iv) The increase must be a once-only matter.
7. (e) The requirements of (1) and (2) above shall be observed in the Anomalies Conference and by a full bench to which an inequities application might be referred. The peak union councils must initiate these claims and, in particular, assist in the resolution of issues as to possible flow-on.

8. *Allowances*

Allowances may be adjusted from time to time where appropriate but this does not mean that existing allowances can be increased extravagantly or that new allowances can be introduced the effect of which would be to frustrate the general intention of the principles.

8. (a) *Existing allowances*

- (i) Existing allowances which constitute a reimbursement of expenses incurred may be adjusted from time to time where appropriate to reflect the relevant change in the level of such expenses.
- (ii) Existing allowances which relate to work or conditions which have not changed may be adjusted from time to time to reflect the movements in wage rates as a result of national wage decisions.
- (iii) Existing allowances for which an increase is claimed because of changes in the work or conditions will be determined in accordance with the relevant provisions of Principle 7(a).

8. (b) *New allowances*

- (i) New allowances will not be created to compensate for disabilities or aspects of the work which are comprehended in the wage rate of the classification concerned.
- (ii) New allowances to compensate for the reimbursement of expenses incurred may be awarded where appropriate having regard to such expenses.
- (iii) New allowances to compensate for changes in the work or conditions will be determined in accordance with the relevant provisions of Principle 7(a).
- (iv) New allowances to compensate for new work or conditions will be determined in accordance with the relevant provisions of Principle 9.

8. (c) *Service increments*

Service increments shall not be introduced or altered except in accordance with the following provisions:

- (i) Existing service increments covered by federal awards may be adjusted in the manner prescribed in (a)(ii) of this Principle.
- (ii) New service increments to compensate for changes in the work or conditions will be determined in accordance with the relevant provisions of Principle 7(a).

9. *First awards and extensions of existing awards*

- (a) In the making of a first award, the long established principles shall apply i.e. the main consideration is the existing rates and conditions (General Clerks Northern Territory Award III CAR 916).
- (b) In the extension of an existing award to new work or to award-free work the rates applicable to such work will be assessed by reference to the value of work already covered by the award.

- (c) In awards regulating the employment of workers previously covered by a State award or determination, existing rates and conditions *prima facie* will be the proper award rates and conditions.

'N.B. The above Principles must be applied in the context of the following statement made by the Commission in the April 1975 National Wage Decision:

"Regardless of the reasons for increases in labour costs outside national productivity and indexation, regardless of the source of the increases (award or over-award, wage or other labour cost) and regardless of how the increases are achieved (arbitration, consent or duress), unless their impact in economic terms is 'negligible', we believe the Australian economy cannot afford indexation."

Weekly Wage Rates in Tasmania

Definitions

In this section, 'weekly wage rates' is used as a short title for '*weighted average minimum weekly wage rates*'. The rates are those applicable to adult males and adult females, and are those fixed in awards.

The minimum wage is the lowest rate payable for a particular occupation. This minimum rate may be expressed as: (i) a total wage (e.g. in awards of the Federal Conciliation and Arbitration Commission); (ii) a basic wage plus secondary wage payments, i.e. additional amounts for skills, loadings, etc. (e.g. in awards of state wage-fixing authorities except Victoria); or (iii) in agreements registered with federal or state wage-fixing authorities. The introduction of varying federal and state practices relating to 'total' and 'basic' wages from time to time has not affected the continuity of the statistical series.

Weighting: To arrive at a weighted average rate for a particular field (e.g. a rate for occupations in Tasmania covered by federal awards) certain data are required. The basic initial information is the award rate applying to each occupation and its relative significance (broadly, the numbers in each occupation). The calculation of average minimum rates is based on the occupational structure existing in 1954.

The individual minimum wage rates, combined to give the averages shown in the tables, are those for representative occupations within each industry. Since the aim is to measure movements in prescribed minimum rates of 'wages' as distinct from 'salaries', those awards, etc., which relate solely or mainly to salary-earners are excluded. Weighted averages of the components of the total minimum weekly wage rate (i.e. basic wage, margin and loading) are calculated separately for adult male employees covered by federal awards, etc., and for those covered by state awards, etc.

'Federal Awards, etc.': These include awards of, or agreements registered with, the Federal Conciliation and Arbitration Commission, and determinations of the Federal Government Public Service Arbitrator.

'State Awards, etc.': These include awards or determinations of, or agreements registered with state industrial tribunals, together with certain unregistered agreements, where these are dominant in the particular industries to which they refer. (In Tasmania the principal tribunals are the State Industrial Boards.)

'Basic Wage Rates': These are weighted averages of the weekly rates prescribed in awards, etc., for the occupations included in the calculation. For industries other than mining, metropolitan basic wage rates have generally been used. However, there are a number of occupations for which basic wage rates other than the metropolitan rate are prescribed. In all such cases, the basic wage rate actually paid is used in the tables. As a result, the weighted average basic wage shown in this section differs from the Hobart basic wage appearing elsewhere.

'Margins': These are minimum amounts, in addition to the basic wage awarded to particular classifications of employees for special features such as skill, experience, arduousness or other like factors.

'Loadings': These include industry loadings and other general loadings prescribed in awards, etc., for the occupations included in the calculation. Loadings that are not applicable to all workers in a specified award occupation (for example, those payable because of length of service; working in wet, dirty or confined spaces, etc.) are not included in the calculation.

Male and Female Rates

Limitation: The wage rates shown in the tables in this section should not be regarded as actual current averages, but rather as indexes expressed in money terms, indicative of trends. The wage rates do not measure the relative level of minimum wages as between states.

Minimum weekly wage rates for adult males are not comparable with 'average weekly earnings per employed male unit' appearing in a later section of this chapter; the latter includes not only the earnings of adult wage-earners but also those of salaried employees, junior wage-earners and part-time and casual employees; included also are over-award payments and overtime earnings.

The following table summarises minimum weekly wage rates for adult males and adult females in Tasmania for recent years. The averages include Federal and State awards, etc., and are for all industry groups combined.

Weighted Average Minimum Weekly Wage Rates (a)
Adult Males and Adult Females: All Groups
 (\$)

End of December—	Adult rate		End of December—	Adult rate	
	Male	Female		Male	Female
1972.....	67.18	49.07	1975.....	117.27	105.56
1973.....	76.80	61.16	1976.....	134.14	122.15
1974.....	106.02	92.47	1977.....	147.46	134.91

(a) Weighted average minimum weekly rates payable for a full week's work (excluding overtime) as prescribed in awards, determinations, etc.

Rates in Industry Groups

Tasmanian details by industry group are given in the next table:

Weighted Average Minimum Weekly Wage Rates and Index Numbers
Adult Males and Adult Females: Industry Groups, 31 December 1977

Industry group	Adult males		Adult females	
	Rates of wage (\$)	Index numbers (a)	Rates of wage (\$)	Index numbers (a)
Mining and quarrying	159.75	565.6	—	—
Manufacturing—				
Engineering, metals, vehicles, etc.	140.61	497.9	135.34	679.8
Textiles, clothing and footwear	132.75	470.1	127.90	642.4
Food, drink and tobacco	143.93	509.6	133.18	669.0
Sawmilling, furniture, etc.	135.16	478.6	119.09	598.2
Paper, printing, etc.	145.25	514.3	134.36	674.9
Other manufacturing	136.92	484.8	—	—
All manufacturing groups	140.05	495.9	130.76	656.8
Building and construction	148.67	526.4	—	—
Railway services	135.74	480.6	146.34	735.1
Road and air transport	145.91	516.6	—	—
Shipping and stevedoring	178.50	632.0	—	—
Communication	171.48	607.2	148.17	744.3
Wholesale and retail trade	150.05	531.3	138.98	698.1
Public authority (n.e.i.) and community and business services	163.01	577.2	143.71	721.9
Amusement, hotels, personal service, etc.	132.04	467.5	127.61	641.3
All industry groups	147.46	522.1	134.91	677.7

(a) Base of index numbers: weighted average minimum weekly wage rate, Australia, 1954=100.0.

Index Numbers

The following table shows, in summary form, the index numbers for adult male and adult female weighted average minimum weekly wage rates in Tasmania for recent years:

**Weighted Average Minimum Weekly Wage Rates: Index Numbers, All Groups
Adult Males and Adult Females**

End of December—	Index numbers (a)		End of—	Index numbers (a)	
	Male	Female		Male	Female
1972	237.9	246.5	March 1977	495.3	642.2
1973	271.9	307.2	June 1977	504.6	654.4
1974	375.4	464.5	September 1977	514.6	667.6
1975	415.2	530.2	December 1977	522.1	677.7
1976	475.0	613.6	March 1978	529.8	687.8

(a) Base of index numbers: weighted average minimum weekly wage rate, Australia, 1954 = 100.0

Australian Rates

In the next table, rates and index numbers are shown for each Australian state:

Australia: Weighted Average Minimum Weekly Wage Rates (a): All Groups, Adult Males

End of December—	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	Australia
RATES OF WAGES (\$)							
1972	68.11	67.86	68.42	65.82	66.15	67.18	67.71
1973	78.13	77.42	79.82	75.20	75.66	76.80	77.69
1974	105.97	105.15	108.95	103.32	101.02	106.02	105.57
1975	118.70	117.32	121.48	115.13	113.32	117.27	117.95
1976	r 136.14	134.10	139.14	132.20	132.29	134.14	r 135.29
1977	149.91	147.45	152.76	145.55	147.73	147.46	148.99
INDEX NUMBERS (b)							
1972	241.2	240.3	242.3	233.1	234.2	237.9	239.8
1973	276.7	274.1	282.6	266.3	267.9	271.9	275.1
1974	375.2	372.3	385.8	365.8	357.7	375.4	373.8
1975	420.3	415.4	430.1	407.6	401.2	415.2	417.6
1976	r 482.0	474.8	492.7	468.1	468.4	475.0	r 479.0
1977	530.8	522.1	540.9	515.4	523.1	522.1	527.5

(a) For a full week's work (excluding overtime), as prescribed in awards, determinations, etc.

(b) Base of index numbers: weighted average minimum weekly wage rate, Australia, 1954 = 100.0.

Hourly Wage Rates in Tasmania

General

Hourly wage rates is the short title for 'Weighted average minimum hourly rates payable'. The concept is completely analogous to that embodied in weighted average minimum weekly wage rates and the calculation is similarly based on rates prescribed in awards or determinations of federal and state industrial authorities or in agreements registered with them.

Definitions

Hours of Work: In the fixation of weekly wage rates, most industrial tribunals prescribe the number of hours constituting a full week's work for the wage rates specified. The hours of work so prescribed form the basis of the compilation of the weighted averages of hourly rates.

Rural industry is excluded from the calculation of weighted average minimum weekly wage rates and also from the calculation of weighted average minimum hourly wage rates. In

addition, the shipping and stevedoring group is also excluded from the latter calculation since definite particulars for the computation of hourly wage rates are not available.

The 40-hour week has operated in Australia generally from 1 January 1948 (N.S.W., from 1 July 1947). Nevertheless, the number of hours constituting a full week's work (excluding overtime) differs between occupations and/or states. The weighted average standard hours of work (excluding overtime) prescribed in awards, determinations and agreements for a full working week, in respect of adult male workers in all industry groups except rural, and shipping and stevedoring, at 30 June 1978, were: N.S.W., 39.71; Victoria, 39.90; Queensland, 39.82; S.A., 39.90; W.A., 39.78; Tasmania, 39.87; Australia, 39.80. Corresponding figures for adult female workers at 30 June 1978 were: N.S.W., 39.53; Victoria, 39.81; Queensland, 39.70; S.A., 39.77; W.A., 39.78; Tasmania, 39.63; Australia, 39.67.

Weekly Wage Rate Definitions: Apart from exclusion of the shipping and stevedoring industry, the definitions in the section headed 'weekly wage rates' apply with equal force to the calculation of hourly wage rates.

Summary of Details

The following table shows, for Tasmania, weighted average minimum hourly wage rates for adult male and adult female workers in all industries (except rural, and shipping and stevedoring) for recent years:

**Weighted Average Minimum Hourly Wage Rates, All Groups
Adult Males and Adult Females**

End of—	Rates of wage (\$)		Index numbers (a)	
	Males (b)	Females (c)	Males (b)	Females (c)
December—1970	1.3550	0.9632	191.5	192.0
1971	1.5192	1.1191	214.7	223.1
1972	1.6591	1.2385	234.5	246.9
1973	1.9010	1.4535	268.7	307.6
1974	2.6396	2.3336	373.1	465.1
March—1977	3.4615	3.2265	489.3	643.1
June—1977	3.5266	3.2879	498.5	655.4
September—1977	3.5971	3.3539	508.4	668.5
December—1977	3.6515	3.4046	516.1	678.6
March—1978	3.7050	3.4555	523.7	688.8

(a) Base of index numbers: weighted average hourly wage rate, Australia, 1954 = 100.0.

(b) All industry groups except rural, and shipping and stevedoring.

(c) All industry groups except rural, mining and quarrying, and building and construction.

Average Weekly Earnings in Tasmania

Source of Data

The figures in the following section are derived from particulars of employment and of wages and salaries recorded on pay-roll tax returns, from other direct collections and from estimates of the unrecorded balance. (In general, businesses with pay-rolls of less than \$5 000 per month are exempt from pay-roll tax and do not need to supply monthly details of employment and of wages and salaries.) Pay of members of the defence forces is not included.

Definitions

'Employed Male Unit': This is a special unit devised to overcome the difficulty that particulars of wages and salaries are not available separately for males and females. (The basic data available are the number of males, the number of females and the total pay-roll only.) The number of females is converted to a *lesser equivalent number* of males by taking into account the approximate ratio of female to male earnings; a divisor for deriving average 'male' earnings is then obtained by adding the actual number of males to the calculated number of 'male equivalents'. The divisor so obtained is called 'employed male units'.

Separate ratios of female to male average earnings are used for individual states based on information from regular surveys of weekly earnings and hours and other sources. The Australian ratio is the weighted average of the State and Territory ratios. (The ratio for Tasmania for the June quarter 1978 was 65 per cent and for Australia 67 per cent.)

Components of Pay-roll: Pay-roll includes, in addition to wages at award rates, the earnings of salaried employees, overtime earnings, over-award and bonus payments, allowances, commissions, directors' fees, and payments made in advance or retrospectively (e.g. advances of annual leave pay). Included also are the wages and salaries, not only of adults, but also of juniors; the earnings may relate to full-time, part-time or casual workers.

Invalid Comparison: Average earnings per employed male unit cannot be compared with male weighted average minimum weekly wage rates shown in the previous section. Weighted average minimum weekly wage rates related to award rates for adult male wage earners in non-rural industry for a full week's work, at the end of each month or year; the average weekly earnings per employed male unit are derived from the pay-roll concept outlined in the previous paragraph and obviously cover a wider field of earnings and of wage and salary earners.

Seasonal Influence: Quarterly figures are affected by seasonal influences. For example, special payments, including prepayment for holiday periods, tend to raise the December quarter and to depress the March quarter averages. Comparisons as to trends are generally best made by relating complete years or corresponding periods of incomplete years. Alternatively, a 'seasonally adjusted' series may be used. Seasonally adjusted estimates (i.e. original data subjected to seasonal adjustment factors to remove the sudden influence of major changes in awards and determinations and of the effects of pay-day variations) are shown in the graph which follows the next table.

Annual and Quarterly Details

The following tables show, for Tasmania and Australia, average weekly earnings per employed male unit; the figures are arranged both as quarterly and annual averages:

Average Weekly Earnings Per Employed Male Unit (a)

Year	Average for quarter ending— (\$)				Average for year	
	September	December	March	June	Amount (\$)	Percentage change (b)
1972-73	90.80	99.30	88.70	102.00	95.20	8.8
1973-74	102.40	117.20	101.60	120.60	110.50	16.1
1974-75	127.30	146.70	135.30	151.40	140.20	26.9
1975-76	150.30	164.70	151.20	165.10	157.80	12.6
1976-77	175.60	188.70	r 175.10	185.50	r 181.20	r 14.8
1977-78	195.90	204.80	194.00	201.10	199.00	9.8

(a) For definitions, see earlier section headed 'Definitions'.

(b) Over preceding year.

Australia: Average Weekly Earnings Per Employed Male Unit (a)
(\$)

Period	N.S.W.	Vic.	Qld.	S.A.	W.A.	Tas.	N.T.	A.C.T.	Australia
1972-73	104.60	102.80	97.10	93.40	98.80	95.20	n.a.	n.a.	101.80
1973-74	121.20	118.80	113.50	110.40	115.00	110.50	n.a.	n.a.	118.30
1974-75	152.10	147.80	142.50	138.60	145.60	140.20	168.50	184.30	148.30
1975-76	172.70	170.50	163.50	158.50	169.10	157.80	190.00	209.00	169.60
1976-77	193.60	191.10	184.50	179.50	190.80	r 181.20	216.80	237.70	190.70
1977-78	212.80	209.20	202.20	197.90	209.20	199.00	241.70	259.10	209.30

PERCENTAGE CHANGE: 1977-78 OVER 1976-77

+9.9	+9.5	+9.6	+10.3	+9.6	+9.8	+11.5	+9.0	+9.7
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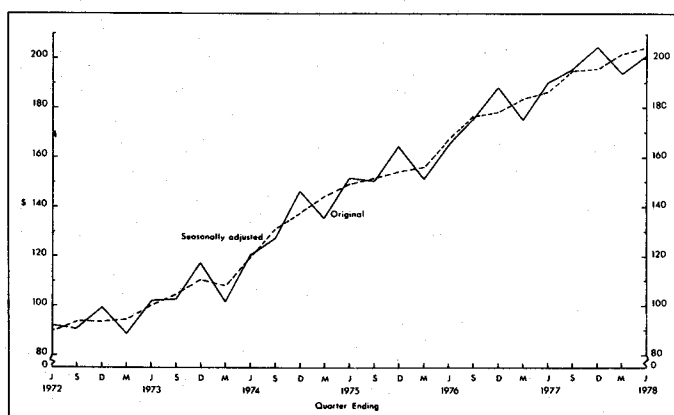
Australia: Average Weekly Earnings Per Employed Male Unit (a)—continued
(\$)

Quarter	N.S.W.	Vic.	Qld.	S.A.	W.A.	Tas.	N.T.	A.C.T.	Australia
1975—June . . .	160.70	154.20	150.40	145.30	156.00	151.40	181.60	191.10	156.40
Dec.	178.20	178.00	169.90	163.70	173.70	164.70	188.70	205.20	175.70
1976—June . . .	183.60	180.70	175.00	167.60	178.80	165.10	199.60	221.90	179.80
Dec.	197.90	197.40	189.80	182.80	194.50	188.70	r 220.20	243.90	195.50
1977—June . . .	201.80	r 200.40	192.30	187.40	198.20	185.50	r 224.70	245.80	r 198.70
Dec.	217.10	211.90	206.80	199.40	211.10	204.80	247.00	263.10	212.50
1978—June . . .	216.90	217.50	211.20	205.90	213.90	201.10	254.40	266.90	215.50

PERCENTAGE CHANGE: JUNE QUARTER 1978 OVER JUNE QUARTER 1977

	+ 7.5	+ 8.5	+ 9.8	+ 9.9	+ 7.9	+ 8.4	+ 13.2	+ 8.6	+ 8.5
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(a) For definitions, see section headed 'Definitions'.

Average Weekly Earnings Per Employed Male Unit
Quarterly Averages, Tasmania

Surveys of Weekly Earnings and Hours

General

Sample surveys in respect of most employers in the private sector subject to pay-roll tax have been conducted annually during recent years by the Bureau as at the last pay-period in October. In 1972, for the first time, government employees were included in the survey. The results of the surveys are based on returns from stratified random samples of private employers subject to pay-roll tax; non-government hospitals not subject to pay-roll tax; local government authorities; and for all federal and state government departments, authorities and semi-government bodies.

For Australia as a whole the 1977 Survey covered approximately 2 639 000 male and 1 403 000 female wage and salary earners, comprising 1 725 000 males and 912 000 females in private employment, and 914 000 males and 492 000 females in government employment.

Definitions

Weekly Earnings: Gross earnings before taxation and other deductions have been made; includes overtime earnings, ordinary time earnings, shift allowances, penalty rates, commission and similar payments; and that part of paid annual leave, paid sick leave, long service leave and paid holidays taken during the specified pay-period. It includes one week's

proportion of payments made other than on a weekly basis, e.g. salary paid fortnightly or monthly. Retrospective payments are excluded.

Juniors: Those under 21 years of age not paid adult rates (but 'adults' may include those under 21 years receiving adult rates).

Full-time Employees: Employees who ordinarily work 30 hours or more a week and who received pay for the last pay-period in October.

Results of Surveys

The next table shows for the private and government sectors in Tasmania: (i) average weekly earnings; (ii) average weekly hours paid for; and (iii) average hourly earnings.

Average Earnings and Hours: All Industries (a)

Particulars	October 1977 (b)	
	Private employment (c)	Government employment (c)
AVERAGE WEEKLY EARNINGS (\$)		
Adult males	197.50	212.20
Junior males	108.00	118.90
Adult females	153.20	180.10
Junior females	100.20	118.90
AVERAGE WEEKLY HOURS PAID FOR		
Adult males	40.5	38.9
Junior males	40.0	39.1
Adult females	38.8	37.2
Junior females	39.5	38.5
AVERAGE HOURLY EARNINGS (\$)		
Adult males	4.88	5.46
Junior males	2.70	3.04
Adult females	3.95	4.84
Junior females	2.54	3.09

(a) Excludes rural industry and private domestic services.

(b) Last pay-period in October.

(c) Excludes managerial, executive, professional and higher supervisory staff. Full-time employees included only.

The following table dissects average weekly earnings by ordinary time and overtime earnings for the private and government sectors:

Average Weekly Overtime and Ordinary Time Earnings, Private and Government Employment, (a) October 1977 (\$)

Particulars	Average weekly overtime earnings		Average weekly ordinary-time earnings		Average weekly total earnings	
	Private	Government	Private	Government	Private	Government
Adult males—						
Manufacturing—						
Metal products, machinery and equipment	18.80	3.80	202.40	165.10	221.20	168.90
Other	13.60	9.10	175.50	196.80	189.10	205.90
Total manufacturing	15.30	5.90	184.40	177.80	199.80	183.70
Non-manufacturing	12.90	7.50	182.20	205.60	195.00	213.20
All industries	14.10	7.50	183.30	204.80	197.50	212.20
Junior males, all industries	3.80	3.80	104.20	115.10	108.00	118.90
Females, all industries—						
Adult	2.80	1.50	150.40	178.60	153.20	180.10
Junior	1.80	1.30	98.40	117.60	100.20	118.90

(a) Average for all employees represented in the survey but excluding managerial, executive, professional and higher supervisory staff. Full-time employees included only.

Minimum Wage Rates, Selected Occupations, Hobart

The following table shows minimum wage rates for selected occupations as prescribed by Federal and State awards, agreements and various determinations (both registered and un-registered) operative at 31 December in recent years. Unless specified, rates shown in the following table are for a 40-hour week. Increases reflect various margin adjustments.

Selected Minimum Wage Rates, Adult Males and Females: Hobart
(\$)

Industry and occupation	31 December		
	1975	1976	1977
ADULT MALES			
Primary production—			
Farming (general), general hand (a)	98.30	113.30	125.60
Grazing, shearer (per 100 flock sheep) (b)	48.20	53.55	57.70
Mining and quarrying—			
Coal mining, miner (machine) (c)	132.30	150.30	164.60
Quarrying, labourer	106.10	121.80	134.50
Engineering, metals, vehicles, etc.—			
Engineering—Fitter or turner	114.50	130.80	144.00
Toolmaker	120.50	137.50	151.00
Textiles, clothing and footwear—			
Clothing trades (readymade), tailor	109.80	126.60	139.60
Footwear, maker	101.20	115.90	128.30
Textiles—Knitting, knitter	101.90	116.70	129.10
Woollen, weaver	98.30	112.60	124.70
Food, drink and tobacco—			
Aerated waters and cordials, general hand	97.90	112.20	124.30
Bacon curing, boner	137.30	155.80	170.70
Bread baking, doughmaker	140.80	159.50	174.30
Brewing, general hand	94.69	108.75	120.88
Butter, cheese and milk processing, butter maker	114.00	130.40	143.70
Confectionery, confectioner (group 1)	111.20	126.20	151.30
Jam, fruit and vegetable preserving, general hand	105.30	120.50	133.20
Meat industry—Labourer (beef, mutton)	106.50	122.20	134.90
Slaughterman (mutton)	137.10	165.00	180.10
Sawmilling, furniture, etc.—			
Sawmilling and timber yards—Machinist (A grade)	118.90	135.70	149.20
Sawyer (circular)	104.40	119.50	132.20
Paper, printing, etc.—			
Printing (general)—Bookbinder	119.70	136.60	150.10
Machine compositor	125.80	143.30	157.10
Printing (newspapers)—Machine compositor (day work) ..	156.30	180.70	196.60
Machine compositor (night work) (d)	165.30	211.30	229.90
Other manufacturing—			
Brickmaking, drawer	113.30	129.70	142.90
Electricity generation and supply, electrical fitter	118.40	135.70	148.90
Building and construction—			
Building (e)—Bricklayer	159.15	191.80	207.45
Builder's labourer, skilled	142.40	177.20	175.40
Builder's labourer, unskilled	132.08	165.60	163.40
Carpenter	159.88	191.80	207.45
Electrician (installation) (f)	129.20	155.50	170.00
Plasterer	159.46	191.80	207.45
Painter	158.17	191.80	207.45
Plumber	136.60	161.80	177.00
Railway services—			
Traffic—Locomotive engine driver	132.25	149.85	163.95
Porter	98.25	112.05	124.05

Selected Minimum Wage Rates, Adult Males and Females: Hobart—continued
(\\$)

Industry and occupation	31 December		
	1975	1976	1977
ADULT MALES—continued			
Road and air transport—			
Road transport, motor truck driver (over 1·2 tonnes to 3·0 tonnes)	115·70	132·10	145·30
Tramways and buses, bus driver (one-man operator) (g)	118·00	134·80	148·30
Shipping and stevedoring—			
Shipping (cargo vessels), able seaman (h) (i)	175·30	197·00	213·80
Stevedoring, wharf labourer (per hour) (j)	4·54	5·11	5·56
Communication—			
Post Office, postman (k)	122·00	138·63	152·17
Wholesale and retail trade—			
Butchers, general butcher	130·50	148·40	162·50
Petrol service stations, attendant	97·60	112·50	123·80
Retail stores, shop assistant (grocery)	92·10	106·60	118·50
Wool stores, wool classer	98·00	112·30	124·40
Public authority (n.e.c.), community and business services—			
Hospitals, orderly	118·50	135·30	148·80
Other services—Graduate engineer	150·30	169·90	185·23
Graduate scientist	138·80	157·40	172·00
Amusement, hotels, personal services, etc.—			
Hairdressing, hairdresser (men's)	117·50	141·40	155·20
Hotels (l), barman	105·90	121·20	133·90
Restaurants (l), cook (one cook only employed)	106·20	121·90	134·60
Watchmen, cleaners, etc., office cleaner (day)	110·70	126·80	139·80

ADULT FEMALES

Textiles, clothing and footwear—			
Dry cleaning, presser	106·30	122·70	135·40
Order dressmaking, machinist	102·40	118·40	130·90
Readymade dressmaking, table hand or coat machinist	102·40	118·50	131·00
Textiles—Knitting, machinist	101·90	116·70	129·10
Woollen, weaver	101·70	116·40	128·80
Food, drink and tobacco—			
Confectionery, general hand	88·40	113·20	125·50
Jam, fruit and vegetable preserving, general hand	105·30	120·50	133·20
Transport and communication—			
Post Office, telephonist (m)	112·50	128·56	141·64
Wholesale and retail trade—			
Retail stores—Shop assistant (confectionery)	92·10	106·60	118·50
Shop assistant (drapery)	91·10	106·60	118·50
Public administration and community and business services—			
Australian Public Service, typist (k)	113·60	129·82	142·95
Hospital nurses (qualified), first year	126·40	152·20	166·60
Amusement, hotels, personal service, etc.—			
Cleaners, office cleaner (day)	110·70	126·80	139·80
Hairdressing, hairdresser	117·25	141·40	155·20
Hotels (l), barmaid	104·60	119·70	132·40
Restaurants (l), waitress	100·60	116·20	128·60
Theatres, usherette, ticket-taker etc. (m)	100·70	115·30	127·70

- (a) 44-hour week. (b) Rates shown are 'not found rates'. Shearers' hours of work are 40 per week. (c) 35 hour week. In addition to the rate shown, an attendance allowance is payable for each full fortnightly pay-period worked. (d) 38-hour week. (e) Rates shown are weekly equivalents of hourly rates. They include allowances for excess fares, travelling time, sick leave, statutory holidays following the job, etc. (f) Weekly rates prescribed for a full week's work (excluding overtime). (g) Government operated services only. (h) Includes an allowance valued at \$7·99 per week for keep and accommodation. (i) Rates shown are for 40 hours of work; seamen are required to work eight hours per day. (j) Rates shown are for casual wharf labourers on other than special cargo work. (k) 36¼-hour week. (l) Weekly cash payments where board and lodging are not provided. (m) 36-hour week.

WAGE-FIXING AUTHORITIES

Tasmanian Industrial Boards

History

The evolution of the Tasmanian Wages Boards system is described in the 1968 *Year Book*. On 22 December 1975, Royal Assent was given to the *Industrial Relations Act 1975*. The new Act superseded the *Wages Board Act 1920*, replacing Wages Boards with Industrial Boards; the more important changes embodied in it are outlined in the 1977 *Year Book*. The following sections summarise the current situation.

Office of the Chairman of Industrial Boards

The Office of the Chairman of Industrial Boards is the wage-fixing Authority for all employers whose employees are not covered by a Federal or Public Service Board award (approximately 70 000 employees in this State). The Authority comprises the Chairman, Deputy Chairman and Assistant Deputy Chairman of Industrial Boards, who are Government-appointed and who act as Chairmen on approximately 70 Industrial Boards that are covered by the Authority. Supporting staff are officers of the Department of Labour and Industry.

Establishment and Constitution of Industrial Boards

Boards are established, by order of the Governor, for particular industries. The constitutional nexus of a Board is the industry of the employer, not the common occupation of the employees, as is the case under other authorities.

Each Board, of which there are about 70 in active existence, consists of an equal number of employer and employee representatives, and a Chairman. The Chairman is the Chairman of Industrial Boards, or at his direction, the Deputy Chairman or Assistant Deputy Chairman of Industrial Boards. Board members are appointed by the responsible Minister; at least one-half (on either side) of the representatives must be employed in the industry within the Board's jurisdiction.

Board members are appointed to a three-year term of office.

Function of Boards

The function of Industrial Boards is to make awards prescribing minimum wage rates and conditions of employment that must be observed by all employers in the industries within the particular Board's jurisdiction. (An 'Industry' being defined in the Act as any trade, business, undertaking, profession, calling, function, process or work performed, carried on, or engaged in by an employer.) Examples are the Mining (Lead-Zinc) Industrial Board, which is established in respect of the industry of mining and processing of silver-lead-zinc ore; the Dentists' Industrial Board, established in respect of dentists and dental mechanics, and hence covering persons employed in those industries, and the Shipbuilders' Industrial Board, established in respect of the industry of constructing, altering, or repairing ships or boats, and dunnaging of ships' holds.

An award cannot contain any matter relating to: (i) the opening or closing hours of an employer's business premises; (ii) the granting of long service leave; (iii) a bonus payment made at the discretion of an employer; or (iv) a superannuation scheme.

Awards may be made to have retrospective effect, and may be made to remain in force for a specified period. Awards may replace, rescind or amend an existing award, and are subject to the *Apprentices Act 1942*, the *Long Service Leave Act 1956*, the *Public Health Act 1962*, the *Factories, Shops and Offices Act 1965*, and the *Mines Inspection Act 1968*.

Meetings of Boards are normally convened by the Chairman of Industrial Boards but the responsible Minister (The Minister for Industrial Relations) may convene a Board meeting for the purpose of settling or preventing an industrial dispute.

Variations to Awards Without a Meeting of a Board

Under section 30 of the Act, the Chairman may make an award amending a previous award, without the convening of a meeting of the Board, upon written application from all representative members of the Board for the particular amendment.

Under section 31 the Chairman can make a Common Rule Award, where the provisions of at least five awards are affected.

On receipt of an application, a notice is published in the daily press. A hearing is then conducted, at which the submissions of employer and employee organisations are considered by the Chairman. Following the hearing, the Chairman may make a Common Rule Award.

This award may only relate to the following matters: (i) a basic wage; (ii) a minimum wage; (iii) standard hours of work; (iv) paid leave of absence; and (v) any matter that is determined in an award made under the *Commonwealth Conciliation and Arbitration Act* that affects or relates to industries in which at least five Boards have jurisdiction. However, this restriction is removed if the award is made on joint application from the Tasmanian Trades and Labour Council and an appropriate employer organisation (usually the Tasmanian Chamber of Industries).

One example of a Common Rule Award is an award made following a 'National Wage' decision of the Federal Conciliation and Arbitration Commission.

Industrial Agreements

Under section 32 of the Act, an industrial agreement may be made, for the purpose of resolving an industrial matter that does not extend to the whole of an industry within the jurisdiction of a Board. When the Chairman satisfies himself that the agreement has been executed by, or on behalf of, all parties involved in the matter, and that the provisions of the agreement are in line with appropriate award provisions, the Chairman 'shall certify that agreement as an award having like effect under this Act'.

Industrial Appeals Tribunal

This Tribunal was set up to provide for appeals against a determination made by a Board or the Chairman to include, or refuse to include, any specified provision in an award or to refuse to make an award on any specified matter. Such appeals must be made within 21 days of the making of a determination. After hearing the appeal, the Tribunal (unless it dismisses the appeal) may reverse or vary the determination in respect of which the appeal is brought; and to give effect to its decision the Tribunal may vary or revoke an award, or make a new award.

A decision of the Tribunal can be challenged only on the grounds of illegality, by application to the Supreme Court.

Compulsory Conferences

Under section 50 of the Act, the Minister may call a compulsory conference for the purpose of settling or preventing an industrial dispute relating to:

- (i) the engagement, dismissal, or reinstatement of any particular employee or class of employees; or
- (ii) the entering into, execution, or termination of any contract for services in circumstances that affect, or may affect, an employee in, or in relation to, his work.

The Minister may summons any person whose presence may help prevent or settle a dispute.

The compulsory conference is presided over by a person directed by the Minister to undertake such duty; in practice this person usually the Chairman, Deputy Chairman or Assistant Deputy Chairman of Industrial Boards.

If after considering the views expressed at the conference the President is of the opinion that certain action should be taken to effect the aim of the conference (viz. to settle or prevent an industrial dispute) then he may, by written order, direct such action to be taken.

Tasmanian Public Service Board

General

The *Public Service Act* 1973 established two new industrial authorities, the Public Service Board and Public Service Arbitrator (for details see the next section) to deal with awards, working conditions, etc., for employees of the State Government and certain State authorities. The Public Service Board comprises three Commissioners appointed by the

Governor for terms not exceeding five years. One of the three Commissioners is appointed Chairman of the Board. In addition to members of the State Public Service the Board's jurisdiction includes persons employed in the teaching service, police force, parliamentary staff positions, public hospitals, non-academic staff of the College of Advanced Education and various State authorities.

Industrial Functions

The Public Service Board may make awards covering wages, salaries and conditions of work for employees falling within its jurisdiction. A main function of the Board is determining 'principal awards', i.e. an award which covers all employees within the scope of a particular group such as administrative and clerical officers. The determining of a principal award involves a complete review of the wages and salaries and other work conditions of all positions within the scope of the particular award.

Unless revoked a principal award is effective for three years. However, during the currency of a principal award it may be amended by the Board to eliminate anomalies, errors or defects contained in it, to incorporate determinations of the Federal Conciliation and Arbitration Commission (e.g. national wage case decisions, etc), or for a number of other reasons.

The Tasmanian Public Service Arbitrator

The Public Service Arbitrator, appointed by the Governor for a term not exceeding five years, has the same area of jurisdiction as the Public Service Board. Applications to the Arbitrator for arbitration on awards may be made where the Public Service Board has: (i) refused an application for an award; (ii) made an award (including an award to supplement a consent award); or (iii) allowed three months or longer to elapse after an application has been made for an award without (a) refusing the application or (b) making an award (including a consent award). Such applications are lodged with the registrar and the Arbitrator, after he has been satisfied that the applicant is entitled to apply for arbitration, arranges to hear the applicant and others affected by the award. After hearing and considering an application the Arbitrator may: (i) refuse the application; (ii) confirm the award or any of its provisions; (iii) direct the Board to vary the award by omitting, altering or adding to the award's provisions; or (iv) where it has refused or failed to make an award, to make an award in specified terms.

The Public Service Arbitrator has an additional function of reviewing individual salary classifications made by any controlling authority following the handing down of any new principal award. Applications for consideration of particular salary classifications may be made by any registered employee organisation in respect of any office or position held by any of its members. In addition, the *State Employees (Long Service Leave) Act 1950* was amended on 19 September 1974. A new section provided for the settlement of any dispute as to whether or when an employee is or has become entitled to leave of absence or an allowance in lieu, or whether a deceased employee's personal representative is or has become entitled to payment of an allowance. The section stipulates that the Public Service Arbitrator shall hear and determine all such disputes.

INDUSTRIAL DISPUTES

Statistics of industrial disputes refer only to those involving a stoppage of work of 10 man-days or more. The information is compiled from the following sources: (i) direct from employers and trade unions; (ii) reports from government departments and authorities; (iii) reports from state and federal industrial authorities; and (iv) information contained in trade journals, newspapers, etc. Particulars of some stoppages are estimated and the following statistics should be regarded as giving only a broad measure of industrial stoppages. The details relating to workers involved, working days lost and estimated loss in wages are in respect of those thrown out of work at the establishments where the stoppages actually occurred, only.

Industrial Disputes (a): Tasmania

Year	Disputes	Workers involved	Working days lost	Estimated loss in wages
	no.	'000	'000	\$'000
1972.....	48	15.2	19.2	305.1
1973.....	63	17.5	140.1	2 322.4
1974.....	79	33.6	88.5	1 800.9
1975.....	57	20.1	40.6	1 007.5
1976.....	43	30.9	62.2	1 792.7
1977.....	39	7.9	26.7	(b) 928.0

(a) The statistics relate to stoppages involving 10 man-days or more in the establishments where the stoppages occurred, only.

(b) The estimated Tasmanian loss was 1.6 per cent of the Australian total in 1977.

The record estimated loss in wages due to industrial disputes (involving stoppages of 10 days or more) in 1973 (\$2 322 400) represented an average loss of \$133 per worker for the 17 500 workers involved. The average loss per worker involved in 1977 was \$117. Details relating to the value of production lost as a direct result of industrial disputes are not available.

The next table summarises statistics relating to industrial disputes in Australia for the last five years:

Industrial Disputes (a): Australia

Year	Disputes	Workers involved	Working days lost	Estimated loss in wages
	no.	'000	'000	\$'000
1973.....	2 538	803.0	2 634.7	45 206.5
1974.....	2 809	2 004.8	6 292.5	128 301.8
1975.....	2 432	1 398.0	3 509.9	95 760.7
1976.....	2 055	2 189.9	3 799.2	114 552.0
1977.....	2 090	596.2	1 654.8	59 674.0

(a) The statistics relate to stoppages involving 10 man-days or more in the establishments where the stoppages occurred, only.

The following table analyses industrial disputes according to the industry of the labour force involved:

Industrial Disputes by Industries

Period	Mining	Manufacturing						Construc- tion
		Metal products, machin- ery and equip- ment	Textiles, clothing, foot- wear	Food, beverages, tobacco	Paper and paper products, printing and publish- ing	Other	Total manu- factur- ing	
NUMBER OF DISPUTES								
1973.....	16	6	2	7	2	2	19	3
1974.....	10	6	5	7	7	5	30	8
1975.....	8	6	—	6	5	5	22	9
1976.....	12	1	—	7	2	5	15	4
1977.....	14	3	—	1	2	3	9	6

Industrial Disputes by Industries—continued

Period	Mining	Manufacturing						Construction
		Metal products, machinery and equipment	Textiles, clothing, footwear	Food, beverages, tobacco	Paper and paper products, printing and publishing	Other	Total manufacturing	
WORKERS INVOLVED (DIRECTLY AND INDIRECTLY) ('000)								
1973.....	2.8	1.8	1.4	4.2	2.7	—	10.1	0.2
1974.....	0.8	5.7	4.2	4.5	3.9	0.1	18.5	6.7
1975.....	2.4	3.4	0.7	1.2	3.2	0.3	8.6	6.9
1976.....	3.6	4.4	1.9	2.2	1.2	4.4	14.1	3.8
1977.....	3.1	0.9	—	0.1	0.3	—	1.4	0.3

WORKING DAYS LOST ('000)								
1973.....	35.4	20.1	16.4	5.5	39.7	0.3	81.9	0.7
1974.....	4.0	45.5	3.7	6.1	12.8	2.6	70.6	7.5
1975.....	8.9	14.4	1.6	3.5	2.7	1.1	23.3	5.9
1976.....	8.2	4.7	1.9	7.2	15.4	6.5	35.7	4.2
1977.....	18.2	0.9	—	0.8	0.2	0.2	2.0	3.0

ESTIMATED LOSS IN WAGES (\$'000)								
1973.....	726.7	357.8	174.0	69.3	640.7	3.4	1 245.1	12.2
1974.....	97.1	927.4	60.8	106.2	281.2	59.1	1 434.7	164.1
1975.....	281.1	279.7	34.2	81.1	77.4	30.2	502.6	157.6
1976.....	307.0	120.1	49.8	186.4	371.8	184.4	912.5	135.7
1977.....	659.0	28.0	—	22.0	5.0	8.0	63.0	110.0

Industrial Disputes by Industries—continued

Period	Railway transport, air transport	Road transport, other transport and storage, communication	Water transport		Entertainment, recreation, hotels, personal service, etc.	Other industries (a)	Total all industries
			Stevedoring services	Other water transport			
NUMBER OF DISPUTES							
1973	3	4	2	3	1	12	63
1974	3	4	8	2	3	11	79
1975	2	1	5	5	2	3	57
1976	3	2	—	3	—	4	43
1977	3	1	—	2	1	3	39

WORKERS INVOLVED (DIRECTLY AND INDIRECTLY) ('000)

1973.....	0.3	0.2	0.2	0.2	0.1	3.5	17.5
1974.....	0.4	0.4	1.6	—	0.9	4.2	33.6
1975.....	0.5	—	0.7	0.4	0.2	0.5	20.1
1976.....	1.6	1.7	0.2	0.1	0.4	5.5	30.9
1977.....	0.4	1.2	—	0.1	1.2	0.2	7.9

Industrial Disputes by Industries—continued

Period	Railway transport, air transport	Road transport, other transport and storage, communication	Water transport		Entertainment, recreation, hotels, personal service, etc.	Other industries (a)	Total all industries
			Stevedoring services	Other water transport			
WORKING DAYS LOST ('000)							
1973	0.3	0.1	—	0.5	—	21.1	140.1
1974	0.4	0.7	3.4	0.1	0.2	1.6	88.5
1975	1.1	0.1	0.6	0.5	—	0.2	40.6
1976	1.7	1.8	0.2	3.2	0.4	6.9	62.2
1977	0.7	0.5	—	0.1	1.2	0.9	26.7
ESTIMATED LOSS IN WAGES (\$'000)							
1973	5.1	1.5	0.5	9.4	—	321.8	2 322.4
1974	1.6	14.0	54.1	2.3	2.6	30.3	1 800.9
1975	26.1	3.7	16.8	15.4	0.9	3.3	1 007.5
1976	47.7	73.0	5.3	120.3	9.6	181.7	1 792.7
1977	34.0	17.0	—	5.0	30.0	10.0	928.0

(a) Includes: agriculture, grazing, etc.; finance and insurance; wholesale and retail trade; real estate and business services; electricity, gas and water; public administration and defence; and community services.

Further References

The information contained in this chapter is generally available in the 6000.0 series of publications produced by the Canberra Office of the ABS. The main bulletins of this series are the following:

- Labour Statistics (6101.0) (annual, 1976 issue released November 1977, 124pp.)
- The Labour Force (6203.0) (monthly, July 1978 released 21/9/78, 22pp.)
- Employment and Unemployment (6213.0) (monthly, June 1978 released 5/9/78, 17pp.)
- Average Weekly Earnings (6302.0) (quarterly, June quarter 1978 released 28/8/78, 4pp.)
- Wage Rates (6312.0) (monthly, July 1978 released 12/10/78, 18pp.)
- Industrial Disputes (6321.0) (monthly, June 1978 released 15/9/78, 3pp.)
- Consumer Price Index (6401.0) (quarterly, September quarter 1978 released 19/10/78, 10pp.)
- Average Retail Prices of Selected Food and Grocery Items, Six State Capital Cities and Canberra (6403.0) (quarterly, June quarter 1978 released 3/8/78, 4pp.)
- Price Index of Materials Used in Building Other than House Building (6407.0) (monthly, September 1978 released 18/10/78, 8pp.)
- Price Index of Materials Used in House Building (6408.0) (monthly, September 1978 released 18/10/78, 7pp.)
- Price Index of Electrical Installation Materials (6409.0) (monthly, September 1978 released 11/10/78, 2pp.)
- Price Index of Metallic Materials (6410.0) (monthly, September 1978 released 11/10/78, 2pp.)
- Price Index of Materials Used in Manufacturing Industry (6411.0) (monthly, July 1978 released 27/9/78, 6pp.)
- Price Index of Articles Produced by Manufacturing Industry (6412.0) (monthly, August 1978 released 28/9/78, 7pp.)

Chapter 18

MISCELLANEOUS

ECONOMIC CENSUSES AND SURVEYS

Introduction

Commencing with the year 1968-69, integrated censuses were introduced for the following sectors of the economy: mining; manufacturing; electricity and gas; retail trade; and wholesale trade. Since then, some sectors have been covered by regular annual economic censuses (e.g. mining) while others have not yet been the subject of a subsequent census (e.g. wholesaling). Also, data for the agricultural sector have recently been made available on a comparable basis. These have been based on a survey (the annual Agricultural Finance Survey) rather than a complete census. In the 1972 *Year Book*, Appendix A gave a detailed description of the first Australian Integrated Economic Censuses, conducted by the Australian Bureau of Statistics for the 1968-69 financial year. The various industry sectors covered by integrated economic censuses and the Agricultural Finance Survey are each featured in this book; references are: (i) *Agriculture*, Chapter 7; (ii) *Mining*, Chapter 8; (iii) *Manufacturing*, Chapter 9; (iv) *Electricity and Gas*, Chapter 9; (v) *Retail Trade*, Chapter 10; and (vi) *Wholesale Trade*, Chapter 10.

In this section are set out the definitions of terms and concepts which apply to the integrated economic censuses. Also, the results of those industry sectors covered by censuses in recent years, together with survey results for the agricultural sector, are brought together to allow inter-sector comparisons to be made. Comparison tables showing the results of the five 1968-69 censuses may be found in Chapter 18 of the 1977 *Year Book*.

Concepts and Definitions

For the 1968-69 and subsequent economic censuses uniform definitions and concepts have been used. This allows inter-sector comparisons (see later section) and increases the usefulness of the data derived from censuses for economic analysis and market research. Definitions and concepts used in these censuses are summarised below.

Establishment: Generally the establishment is the whole of each physical location operated by one enterprise, given that the main activity of the establishment is within scope of the census. Usually only one return is submitted for each establishment *classified to the industry of its main activity*. The principal exception to the 'one return one establishment' rule is where a secondary activity at a location creates gross receipts of \$1m or more. In such cases the secondary activity may have to be reported on a second return appropriate to its industry or its sector. Details for *administrative offices and ancillary units* (such as head offices, storage depots, garages, laboratories, etc.) which serve or administer establishments within the same enterprise but which are located away from them are treated as follows: (i) if only one establishment is served or administered then details are included in the establishment return; or (ii) if more than one establishment is served or administered, details are included on the enterprise return. *Manufacturers' sales branches* located away from the parent manufacturing establishment are treated as ancillary units provided they do not distribute goods to customers from their own holdings of stocks. If the unit does distribute from stocks in this manner then it is treated as an establishment and included in the wholesale sector.

Electricity and Gas Industries—the Exception: The single operating location is not suitable as a basis for enterprises engaged in producing or distributing electricity or gas. Therefore for electricity and gas industries, a special treatment was devised—the establishment unit for these industries consists of all locations operated by the enterprise in the one state.

Enterprise: This is broadly the operating legal entity and is the key unit for the collection of information. Where a number of legal entities operate as a group, owned or controlled by a single company, the enterprise is not the group as a whole, but each individual operating legal entity in the group.

Enterprise Group: Comprises a group of operating legal entities owned or controlled by a single company.

Value Added: Common to all sectors covered by integrated economic censuses is the following definition: value added *equals* turnover *plus* increase in stocks *minus* purchases, transfers in and selected expenses. The value added measure can then be aggregated for all establishments and sectors covered by the censuses *without duplication*. In broad terms, value added is the surplus from which establishments pay wages and salaries, interest, depreciation, rents and overheads. The remainder is available for appropriation as profits (after provision for income tax).

Turnover: The definition of turnover is as follows: (a) In manufacturing and mining censuses: (i) sales of goods produced by the establishment; (ii) sales of goods not produced by the establishment; (iii) transfers out of goods to other establishments of the same enterprise; (iv) bounties and subsidies on production; (v) all other operating income but excluding revenue from rent and leasing, interest other than hire purchase interest, dividends and sales of fixed tangible assets; and (vi) capital work done for own use or for rental or lease. (b) In retail and wholesale trade censuses: (i) sales of goods (owned by the enterprise); (ii) transfers out of goods to other establishments of the same enterprise (applies only to wholesale); (iii) selling and purchasing commissions received (applies only to wholesale); (iv) all other operating income but excluding items specified in (a) (v) above; and (v) goods withdrawn from stock for own use (as fixed tangible assets, or for rental or lease).

Purchases and Selected Expenses: Are defined as follows: (a) In manufacturing and mining censuses: (i) the value of purchases of materials, fuels, electricity and gas, and wrapping and packaging materials is supplemented by the value of transfers in from other establishments of the enterprise; (ii) purchases of goods for resale are included as well as purchases for own use in production; and (iii) selected expenses comprise repair and maintenance expenses, charges for sub-contract and commission work, outward freight and cartage, motor vehicle running expenses and sales commission payments. (b) In retail and wholesale trade censuses: (i) the value of purchases of goods for resale is widened to include purchases for both wholesale and retail trade, no matter whether the establishment is primarily a retailer or a wholesaler; (ii) the value of purchases also includes purchases of materials for manufacturing to cover cases where the retail or wholesale establishment has this secondary activity; and (iii) selected expenses comprise those specified in (a) (iii) above *plus* purchases of wrapping and packaging materials, and electricity and gas (see item (a) (i) in preceding manufacturing and mining group for the reason for this addition).

Stocks: Are the total held by the establishment and may therefore include some stocks held for secondary activities, e.g. a manufacturing establishment may have, in its stocks figure, merchant goods held or a retail establishment may include in its return, stocks held for wholesaling and manufacturing.

Transfer Values: Transfers, both in and out, are confined to transfers of goods; the term is further narrowed to mean transfers between establishments of the same enterprise. Provision exists for recording transfers in all census sectors except retail trade and here the instruction requires purchases to be reported inclusive of transfers in, but net of transfers out. Thus, transfers are taken into account in arriving at value added since transfers out, as just defined, are a part of turnover and transfers in are a part of purchases and selected expenses.

Employment, Salaries and Wages: In accordance with the new concept of treating the establishment as a whole, all employees are entered, including those working in administrative offices and ancillary units which serve only the one associated establishment.

Fixed Capital Expenditure: The general basis for collection is: purchases of new and second-hand assets *less* sales of second-hand assets. (For establishments of multi-establishment enterprises, transfers from other establishments of the enterprise are treated as purchases, and transfers to such establishments are treated as sales.) The dissection of fixed

capital expenditure comprises expenditure on: (i) motor vehicles; (ii) land and buildings; and (iii) plant and machinery. A further distinction is made between new assets and second-hand assets.

Industrial Classification

The Australian Standard Industrial Classification (ASIC) was adopted for use in the 1968-69 and subsequent economic censuses. ASIC defines the industries for which statistics are collected in the censuses and allows the scope of the individual censuses to be marked out without gaps or duplications between them. It also identifies the statistical units (establishments, enterprises, etc.) and lays down standard rules for identifying and coding them to industries of the classification. A detailed description of ASIC may be found in the Bureau publication 'Australian Standard Industrial Classification (Preliminary Edition) 1969, Vol. 1'.

Agricultural Sector Financial Statistics

As from 1968-69, the Bureau has progressively developed annual agricultural industry finance surveys to obtain: firstly, details of farm expenditure; and, more recently, a wide range of financial data on a compatible basis to that available for industry sectors covered by the integrated economic censuses. The coverage of the 1974-75 and subsequent Agricultural Finance Surveys has consisted of a randomly selected sample of agricultural enterprises (classified to ASIC Subdivision 01). Results of these surveys have been used to calculate estimates covering all agricultural enterprises. A complete agricultural sector economic census of all agricultural enterprises has not been conducted, nor is one proposed, because of the high cost involved.

The concepts and definitions used are basically the same as those outlined above for the integrated economic censuses. Additional notes are set out below:

Value Added: When determining the 'increase in stocks' only livestock is taken into account due to its relative significance and to the difficulties associated with including other farm stocks.

Turnover: Turnover of agricultural enterprises includes proceeds received during the year (which do not necessarily relate to the production of that year) from the sale of crops, livestock and livestock products, and other miscellaneous revenue. Miscellaneous revenue includes both sundry agricultural proceeds (such as proceeds from insurance recoveries, agistment, livestock service, artificial insemination, government relief payments, agricultural services such as contract shearing, harvesting, etc.) and also receipts from any non-agricultural activity of the enterprise.

Purchases and Selected Expenses: Include cash payments made during the year for goods and services including marketing expenses; purchases of livestock, feed, fodder, fertiliser, chemicals and veterinary supplies and services; payments for electricity, fuel, water and drainage; payments to contractors; repairs and maintenance to motor vehicles, machinery, equipment, buildings, structures and fences; motor vehicle registration and insurance; insurance of plant; payments for agistment; etc.

Adjusted Value Added: This is value added *plus* rent and leasing revenue (other than land) *less* rates and taxes, insurance payments, other expenses, and rent and leasing expenses (other than land).

Gross Operating Surplus: is adjusted value added *less* wages, salaries and supplements.

Cash Operating Surplus: is gross operating surplus *less* the increase in value of livestock, interest and land rent paid *plus* interest and land rent received. It is the surplus available for profit, income tax and depreciation provisions.

Net Capital Expenditure: is the expenditure on new and second-hand assets *less* sales of existing assets and trade-in allowances.

Gross Indebtedness: is the total amount owing at 30 June.

Comparisons Between Industry Sectors

Principal items from economic censuses conducted in recent years are shown below:

Mining, Manufacturing, Electricity and Gas Censuses, 1971-72 to 1976-77

ASIC classification of establishments and year		Number of establishments at 30 June	Persons employed at 30 June	Wages and salaries	Value added
			No.	\$'000	\$'000
Mining (a)—	1971-72	53	4 640	25 521	59 317
	1972-73	48	4 326	28 091	62 186
	1973-74	56	4 317	30 623	85 321
	1974-75	56	4 450	43 026	80 903
	1975-76	57	4 248	47 197	80 607
	1976-77	63	4 133	51 538	118 619
Manufacturing—	1971-72	933	33 144	119 411	245 068
	1972-73	912	31 504	130 703	283 420
	1973-74	935	32 359	161 386	340 250
	1974-75(b)	628	28 708	194 883	402 255
	1975-76r	667	27 753	211 327	456 029
	1976-77p	628	27 793	246 482	531 337
Electricity and gas—1971-72		5	2 971	14 658	45 749

(a) Census results exclude 'small' tin miners whose sales were less than \$20 000.

(b) From 1974-75 the Census results exclude single establishment enterprises employing less than four employees at 30 June.

As already noted, value added is a measure that can be aggregated and directly compared for all establishments and industry sectors for which it has been determined, *without duplication*. The following table compares the industry sectors of agriculture, mining and manufacturing on the basis of value added for recent years.

Integrated Economic Censuses and Agricultural Finance Survey: Value Added

Industry sector	1974-75		1975-76		1976-77	
	Value added	Per head of mean population	Value added	Per head of mean population	Value added	Per head of mean population
	\$m	\$	\$m	\$	\$m	\$
Agriculture (a)	67.9	169	r 66.6	r 164	77.9	190
Mining	80.9	201	80.6	198	118.6	290
Manufacturing	402.3	999	r 456.0	r 1 123	p 531.3	1 299

(a) Estimates based on sample surveys and therefore subject to possible inaccuracies. 'Standard errors' indicating the reliability of the estimates are included in the Canberra Office publication *Agricultural Sector, Part IV, Financial Statistics* (Cat. No. 7507.0).

AUSTRALIAN NATIONAL ACCOUNTS

Introduction

National accounting aims at providing a systematic summary of the transactions taking place in the economy, especially of those that relate to the production and use of goods and services, and to transfers of income or capital between sectors of the economy. National accounts statistics therefore provide a medium for describing or analysing the forces that drive and shape the economy.

Estimates of national income and expenditure are compiled by the Bureau and presented in a regular sequence of national accounts publications, in which the first-estimates for the year just completed are successively revised and additional detailed tables are issued as further information becomes available. The cycle begins in August with the Budget White Paper *National Income and Expenditure* which gives preliminary estimates for the year just completed and later estimates for the previous four years. The June quarter issue of *Quarterly*

Estimates of National Income and Expenditure follows shortly after this with estimates for quarters for the year just completed and for the previous two years. Issues for subsequent quarters may revise the past quarterly estimates as they add additional quarters and may revise annual estimates for some items for the most recent years. The majority of revisions are the result of changes in principles and definitions rather than the correction of errors. *Australian National Accounts, National Income and Expenditure* is the most comprehensive national accounts publication; after estimates for this publication are finalised in about February and sent for printing, mimeographed *Preliminary Statements* are issued which make available selected tables in advance.

Description of National Income and Expenditure Accounts

A brief description of the conceptual basis of national accounts is given in the 1977 *Year Book*, but for a more detailed treatment of the concepts and structure of the Australian National Accounts reference should be made to *Australian National Accounts, National Income and Expenditure* (Cat. No. 5204.0).

Australian National Accounts Statistics

The next table gives details of the items on the receipts side of the domestic production account for recent years. Estimates of gross domestic product at average 1974-75 prices are also included. Such estimates are described as *estimates at constant prices* and are designed to remove the direct effect of price changes from the original (current prices) estimates. Estimates at constant prices are largely based on the application of specially constructed price indexes. All estimates shown below are expressed in current prices unless otherwise stated. They have been taken from the 1976-77 issue of *Australian National Accounts, National Income and Expenditure* (Cat. No. 5204.0) and are subject to revision.

Gross Domestic Product, Australia

Particulars	1971-72 r	1972-73 r	1973-74 r	1974-75 r	1975-76 r	1976-77 p
Wages, salaries and supplements	\$m	20 067	22 375	27 596	35 409	40 589
Gross operating surplus—						
Trading enterprises—						
Companies	\$m	5 287	6 137	6 713	7 203	8 341
Unincorporated enterprises	\$m	4 763	5 818	7 545	7 477	8 294
Dwellings owned by persons	\$m	2 017	2 323	2 739	3 329	4 057
Public enterprises	\$m	1 224	1 272	1 235	1 122	1 622
Financial enterprises	\$m	713	831	864	1 041	1 710
Less Imputed bank service charge	\$m	850	1 075	1 378	1 625	1 861
Gross domestic product at factor cost	\$m	33 221	37 681	45 314	53 956	62 752
Indirect taxes less subsidies	\$m	3 699	4 242	5 317	6 619	8 526
Gross domestic product	\$m	36 920	41 923	50 631	60 575	71 278
Percentage increase in G.D.P. (a)		11.5	13.6	20.8	19.6	17.7
G.D.P. at average 1974-75 prices—						
Value	\$m	54 569	56 617	59 735	60 575	62 213
Percentage increase (a)		4.4	3.8	5.5	1.4	2.7
Implicit rate of price increase (per cent) (b)		6.9	9.4	14.5	18.0	14.6
Gross farm product	\$m	2 241	3 039	4 327	3 685	3 780
Gross non-farm product	\$m	34 679	38 884	46 304	56 890	67 498

(a) Over previous year.

(b) Percentage increase in weighted average of prices of all items contributing to the G.D.P. above the average for previous year, implied by the figures given for G.D.P. at current and constant prices.

Implicit Price Deflators: The item 'Implicit rate of price increase' in the above table is derived from an index referred to as the 'gross domestic product implicit price deflator'. Such

indexes are obtained (to the same base year as the constant price series from which they are derived) by dividing aggregate flows of goods and services measured at current prices by the corresponding estimates at constant prices. Implicit price deflators have limitations as indicators of price change as they can be affected by the physical composition of the aggregates and components to which they refer (they are *not* 'fixed weight' indexes), and by seasonal factors, and the aggregates are subject to revision. These limitations render implicit price deflators of limited value in assessing quarterly price changes but are seldom of great significance with regard to annual national accounting aggregates.

The next table shows details for items making up the receipts side of the general government income and outlay account. Percentage increases are also shown for major items and for the consumer price index (six state capitals combined). The latter give some perspective to the monetary values (current prices) which are subject to growth due to price increases as well as being subject to *real* growth (see also the item 'Implicit rate of price increase' in the preceding table). In 1976-77 total 'General government receipts' as a proportion of gross domestic product was 32.4 per cent compared with 29.5 per cent in 1971-72.

General Government Income and Outlay Account: Receipts

Particulars	1971-72 r	1972-73 r	1973-74 r	1974-75 r	1975-76 r	1976-77 p
AMOUNT (\$ million)						
Income from public enterprises	794	777	677	542	873	1 169
Interest, etc., received	297	339	419	540	585	746
Indirect taxes	4 088	4 567	5 638	6 944	8 842	10 050
Direct taxes on income—						
Companies, etc.	1 520	1 618	2 013	2 432	2 600	2 894
Households	3 765	4 085	5 485	7 709	9 213	11 046
Other direct taxes, fees, fines, etc.	439	488	560	590	684	762
Total receipts	10 902	11 873	14 792	18 757	22 797	26 668
PERCENTAGE INCREASE OVER PREVIOUS YEAR						
Indirect taxes	13.7	11.7	23.5	23.2	27.3	13.7
Direct taxes on income—						
Companies, etc.	6.5	6.4	24.4	20.8	6.9	11.3
Households	18.6	8.5	34.3	40.5	19.5	19.9
Total receipts	13.9	8.9	24.6	26.8	21.5	17.0
Consumer price index (a)	6.8	6.0	12.9	16.7	13.0	13.8

(a) Weighted average for the six state capital cities (all groups).

National Accounts Statistics Relating to Tasmania

The following tables are included to provide information relating to household income and private final consumption expenditure within Tasmania during the last six years, together with an analysis of Tasmanian farm income during the same period. Two tables which show Tasmanian figures relative to those of the other Australian states are also included. Relevant definitions are given below:

Household Income is the total income, whether in cash or kind, received by persons normally resident in Australia. It includes both income received in return for productive activity (such as wages, salaries and supplements, incomes of unincorporated enterprises, etc.) and transfer incomes (such as cash social service benefits, interests, etc.). Household income also includes any property income received by non-profit organisations such as private schools, churches, charitable organisations, etc. That part of farm income accruing to unincorporated enterprises is included under household income.

Farm Income is the difference between the gross value of farm production (after stock valuation adjustment) and total costs (i.e. production costs plus net rent and interest paid and third party insurance transfers) incurred.

Private Final Consumption Expenditure covers the expenditure on goods and services by persons and expenditure of a current nature by non-profit organisations serving households. Goods and services purchased by businesses or general government are excluded. It excludes the purchase of dwellings and capital expenditure by non-profit organisations.

Household Income: Tasmania

Particulars		1971-72 r	1972-73 r	1973-74 r	1974-75 r	1975-76 r	1976-77 p
Wages, salaries and supplements	\$m	534	604	727	963	1 091	1 265
Income of farm unincorporated enterprises	\$m	31	47	65	24	22	53
Income of other unincorporated enterprises	\$m	61	70	86	106	127	157
Income from dwellings	\$m	17	19	25	27	33	44
Transfers from general government	\$m	71	87	105	147	196	237
All other income	\$m	68	77	94	124	143	165
Total household income	\$m	782	904	1 102	1 391	1 612	1 921
Less Income tax payable	\$m	93	100	140	206	250	n.y.a.
Other direct taxes fees, fines, etc.	\$m	10	10	12	13	17	n.y.a.
Consumer debt interest	\$m	10	12	16	19	23	n.y.a.
Transfers overseas	\$m						
Household disposable income—							
Amount	\$m	669	782	934	1 153	1 322	n.y.a.
Percentage increase (a)		12.4	16.9	19.4	23.4	14.7	n.y.a.

(a) Over previous year.

Household Income by States, 1976-77

N.S.W.	Vic.	Qld.	S.A.	W.A.	Tas.	A.C.T.	N.T.	Australia
TOTAL INCOME (\$ million)								
25 013	19 657	9 686	6 163	5 637	1 921	1 301	505	69 883
INCOME PER HEAD OF MEAN POPULATION (\$)								
5 070	5 222	4 565	4 857	4 765	4 697	6 316	4 856	4 995

Private Final Consumption Expenditure: Tasmania
(\$ million)

Particulars	1971-72	1972-73	1973-74	1974-75	1975-76 r	1976-77 p	
						Amount	Per cent
Food	116	126	149	171	190	231	17.8
Cigarettes and tobacco	18	19	22	26	34	37	2.9
Alcoholic drinks	42	44	49	62	70	79	6.1
Clothing, etc.	62	65	83	98	103	119	9.2
Health	37	41	47	60	65	79	6.1
Rent	68	75	90	110	131	160	12.3
Gas, electricity, fuel	20	21	22	27	33	40	3.1
Household durables	43	45	61	81	107	122	9.4
Newspapers, books, etc.	11	12	15	16	19	22	1.7
All other goods, n.e.i.	24	26	34	r 41	45	53	4.1
Travel and communication	95	103	120	r 152	183	211	16.3
All other services	r 63	75	87	r 107	126	145	11.2
Total	r 599	652	779	r 951	1 106	1 298	100.0

PERCENTAGE INCREASE (OF TOTAL) OVER PREVIOUS YEAR

	r 10.1	r 8.8	19.5	r 22.1	r 16.3	17.4	..
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Private Final Consumption Expenditure: States, 1976-77 p
(\$ million)

Particulars	N.S.W. and A.C.T.	Vic.	Qld.	S.A. and N.T.	W.A.	Tas.	Australia	
							Amount	Per cent
Food	2 972	2 248	1 157	831	738	231	8 177	17.1
Cigarettes and tobacco ..	452	310	158	128	98	37	1 183	2.5
Alcoholic drinks	1 253	663	455	256	273	79	2 979	6.2
Clothing, etc.	1 505	1 032	514	398	325	119	3 893	8.1
Health	1 296	773	353	301	230	79	3 032	6.3
Rent	2 690	2 396	997	606	560	160	7 409	15.5
Gas, electricity, fuel	397	348	121	84	79	40	1 069	2.2
Household durables	1 538	1 097	600	448	382	122	4 187	8.8
Newspapers, books, etc.	308	208	113	70	59	22	780	1.6
All other goods, n.e.i. ...	734	531	285	197	161	53	1 961	4.1
Travel and communica- tion	2 799	1 967	1 063	672	628	211	7 340	15.4
All other services	2 378	1 607	767	469	438	145	5 804	12.1
Total	18 322	13 180	6 583	4 460	3 971	1 298	47 814	100.0

PERCENTAGE INCREASE (OF TOTAL) OVER 1975-76

	14.4	14.6	15.5	15.7	17.4	17.4	(a) 15.0	..
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(a) At average 1974-75 prices, the total for Australia for 1976-77 was \$37 186m, an increase of only 3.3 per cent over 1975-76.

Farm Income: Tasmania
(\$ million)

Particulars	1971-72 r	1972-73 r	1973-74 r	1974-75 r	1975-76 r	1976-77
Gross value of farm production—						
Wool (including skin wool)	18	37	32	24	28	35
Livestock slaughterings	31	44	58	32	34	45
Grain crops	2	2	3	3	2	4
Fruit	14	18	15	16	14	13
Other crops	18	20	29	31	28	41
Other livestock products	28	26	26	31	34	41
Total	111	147	163	137	140	179
Less Stock valuation adjustment	1	4	-2	-	1	
Less Production costs other than wages and depreciation—						
Marketing costs	14	18	16	17	13	75
Seed and fodder	10	15	14	16	12	
Other costs	26	28	32	37	42	
Gross farm product at factor cost	60	82	103	67	72	104
Less Depreciation	10	10	10	12	12	50
Less Wages, net rent and interest paid and third party insurance transfers	18	22	26	31	37	
Farm income	32	50	67	24	23	54
Less Farm income of companies	1	3	2	-	1	1
Income of farm unincorporated enterprises	31	47	65	24	22	53

HOUSEHOLD EXPENDITURE SURVEY

The 1974-75 Collection

During 1974-75 the Bureau conducted a survey based on a sample of private dwellings in the six state capital cities and Canberra. Trained interviewers were used to collect details of expenditure on major items such as the purchase of vehicles and property and the payment of household accounts (electricity and gas, municipal rates, etc.) and to collect details of income. For other expenditure items, all household members over 15 years of age were asked to record all payments they made over a two-week period (the actual dates varied to give an even spread over the 12-month survey period) in a specially designed diary.

The selected private dwellings included houses, flats, home units, caravans and any other structures used as private residences. Hotels, boarding houses, institutions, etc. were specifically excluded, being outside the scope of the survey. Information was collected on a household basis because many items of expenditure are related to the household rather than to an individual. Such items include food, electricity, household equipment, etc.

Certain categories of households were excluded from the survey. These included foreign diplomats and their staff, overseas servicemen, overseas visitors, visitors staying in the household for less than four weeks after the initial interview and certain residents who were absent at the time of the initial interview or who were leaving within seven days of it. Children under 15 years of age who were away at boarding school or away for less than four weeks were included as members of a household. An estimation procedure was used for households which did not respond.

Household Expenditure Survey 1975-76

A further household expenditure survey was conducted by the Bureau in respect of 1975-76. This was not limited to the six state capital cities but covered the whole of each state. The same definitions, concepts and limitations apply as for the 1974-75 survey. However, care should be taken in comparing results of the 1974-75 and 1975-76 surveys because of the difference in geographical coverage and because of the difference in sample sizes. The number of households in the 1974-75 sample for the capital cities was 9 095 (Hobart, 562), whereas in 1975-76 the number of households in the sample for Australia was much lower at 5 869, of which 2 813 were in the capital cities (145 in Hobart). Sample errors can be significant in making inter-survey comparisons.

Definitions

The following definitions apply with respect to the surveys:

Expenditure: was defined as all payments for goods and services for private use made by all members of the selected household who were aged 15 years and over. In general, expenditure was collected on the basis of payments made during the reference period rather than on the basis of goods and services 'acquired' or 'consumed' during the period.

Other Payments: included payments such as income tax, land tax, life insurance premiums, superannuation contributions, purchases of and deposits on land and dwellings, and gambling payments. Receipts from sales of land and dwellings and gambling winnings are offset against payments. As a result 'Other payments' may appear as a negative value.

Household Income: was defined as gross income from all sources before taxation and other deductions were made, and was collected from all members of the selected household aged 15 years and over. The main components of household income are:

- (i) wages and salaries (including income-in-kind received from an employer);
- (ii) income derived from self-employment (including wages and income-in-kind taken from the business);
- (iii) government social service benefits;
- (iv) income from investments (including interest, dividends, royalties and rent); and
- (v) other regular income (including educational grants and scholarships received in cash, benefits received from an overseas government, income received for

professional advice outside the normal job situation, superannuation, workers' compensation, alimony or maintenance, and any other allowances regularly received).

Although information about most types of income was obtained on a current basis, some data, principally incomes from investment and from self-employment, were obtained in respect of the previous 12 months or financial year.

A Household: was defined as a group of people who live together as a single unit in the sense that they have common housekeeping arrangements, that is they have some common provision for food and other essentials of living. A person, or persons, living in the same dwelling but having separate catering arrangements, constituted a separate household.

Adults/Children: Adults are persons aged 18 years and over. Children are persons under 18 years of age.

Persons Working: are those persons aged 15 years and over who reported any 'earned' income (i.e. income from self-employment or from part-time or full-time wage and salary employment). In general, persons who were asked to report 'earned' income were those who worked in a job or business, or received income from a job or business, at any time during the four weeks prior to the interview.

Retired Persons: are those persons who reported no 'earned' income and who described themselves as being retired (e.g. having retired from work for reasons of age or sickness).

Employment Status: All persons aged 15 years and over were classified either as workers or as non-employed persons (e.g. housewife, retired, unemployed, full-time student) on the basis of whether or not they reported 'earned' income.

Limitations

Since the estimates are based on a sample they are subject to sampling variability. In addition to sampling errors, the estimates are also subject to errors in reporting, estimating and processing. Considerable effort was made to minimise such errors and the reliability of the results can be gauged by comparing them with other statistics such as production and retail sales data. From this type of comparison it appears that expenditure was understated on some items, particularly alcohol and tobacco. This is in line with experience in other countries where similar surveys have been carried out.

Because of the extended collection period there may be some distortion as a result of changing money values and relative prices of goods and services.

Survey Results

The following table summarises results from the 1975-76 survey together with 1974-75 survey results for Hobart:

Average Weekly Household Income and Expenditure, All Households

Item	1974-75	1975-76		
	Hobart	Hobart	Tasmania	Australia
Number of households in sample	562	145	422	5 869
Estimated total number of households ('000)	47.7	51.3	121.8	r 4 159.5
Average number of persons per household	3.02	3.12	3.24	3.09
<hr/>				
Average weekly household expenditure—	\$	\$	\$	\$
Food—				
Bread, cakes and cereals	3.18	3.61	3.77	3.83
Meat and fish	7.41	r 8.30	7.88	r 8.06
Dairy products, oils and fats	4.30	r 4.84	5.02	5.12
Fruit and vegetables	3.91	4.15	4.18	4.82
Other food	10.86	r 10.74	10.49	r 11.80
Total food	29.70	31.63	31.35	33.66

Average Weekly Household Income and Expenditure, All Households—*continued*

Item	1974-75	1975-76		
	Hobart	Hobart	Tasmania	Australia
	\$	\$	\$	\$
Average weekly household expenditure— <i>continued</i>				
Current housing costs (a)	19.57	21.43	r 18.34	r 23.65
Fuel and power	3.96	4.83	r 4.42	r 4.02
Alcohol and tobacco	8.48	10.16	9.03	r 10.24
Clothing and footwear	13.39	18.12	15.01	r 14.35
Household equipment and operation	16.17	20.81	18.88	r 17.28
Medical care and health expenses	4.35	r 4.85	4.45	5.30
Transport and communication	23.29	r 34.42	r 35.47	r 33.62
Recreation and education	10.60	18.05	13.99	r 15.78
Miscellaneous goods and services	15.85	r 16.54	13.53	14.47
Total expenditure (b)	145.38	180.84	r 164.48	r 172.35
Other payments	33.92	51.46	r 41.24	r 48.80
Total payments	179.30	232.30	r 205.72	r 221.15
Average weekly household income	187.29	239.47	210.11	r 225.35

(a) includes principal and interest components of any housing loan repayments but *excludes* outright purchase or deposit on dwellings or land, or other capital payments, which are included in 'Other payments'.

(b) Excludes 'Other payments'.

The next table shows average weekly household income and expenditure in 1974-75 by income group for each of the capital cities.

In the lower household income ranges *expenditure and other payments* exceeded *income* as defined. Some households will have financed purchases out of savings or other sources (such as loans and receipts from the sale of assets) which are not included in the definition of income. In the higher income ranges, income exceeded expenditure and other payments.

Average Weekly Household Income and Expenditure, 1974-75

Capital city	Weekly household income group						
	Under \$80	\$80 and under \$140	\$140 and under \$200	\$200 and under \$260	\$260 and under \$340	\$340 and over	All households
AVERAGE WEEKLY HOUSEHOLD INCOME (\$)							
Sydney	46.13	114.21	168.10	228.81	293.52	466.75	208.12
Melbourne	46.74	113.98	169.66	228.61	293.94	459.30	212.22
Brisbane	49.03	114.06	168.76	228.55	293.05	473.67	197.91
Adelaide	48.60	116.08	168.03	225.45	293.27	433.96	189.24
Perth	48.74	113.83	167.92	227.67	296.59	454.31	192.76
Hobart	50.84	111.43	170.96	231.50	362.61		187.29
Canberra	97.35		170.11	229.81	293.49	451.79	277.37
All capitals	47.36	114.31	168.72	228.34	293.77	461.20	205.92

Average Weekly Household Income and Expenditure, 1974-75—continued

Capital city	Weekly household income group						
	Under \$80	\$80 and under \$140	\$140 and under \$200	\$200 and under \$260	\$260 and under \$340	\$340 and over	All households
AVERAGE WEEKLY HOUSEHOLD EXPENDITURE (a) (\$)							
Sydney	59.41	136.73	178.57	218.08	273.40	385.68	200.88
Melbourne	63.34	139.31	175.79	214.59	260.89	407.02	205.30
Brisbane	54.58	123.66	167.15	211.71	246.22	368.42	179.85
Adelaide	68.41	142.60	178.32	207.48	244.77	361.16	183.79
Perth	69.46	120.31	167.76	215.51	255.43	403.05	185.00
Hobart	56.32	110.72	164.31	234.08	325.18		179.30
Canberra	127.37		194.57	220.11	283.62	398.64	266.47
All capitals	61.94	134.27	175.32	215.32	262.97	391.38	197.62

ESTIMATED TOTAL NUMBER OF HOUSEHOLDS ('000)

	9.0	10.3	9.7	8.6	10.2	47.7
Hobart						

(a) Includes 'other payments'.

In the following table, details of household expenditure, etc. for 1975-76 are shown by weekly household income group for Tasmania:

Household Expenditure, etc. by Household Income, Tasmania, 1975-76

Particulars	Weekly household income group						
	Under \$80	\$80 and under \$140	\$140 and under \$200	\$200 and under \$260	\$260 and under \$340	\$340 and over	All households
Number of households in survey	71	60	93	85	60	53	422

ESTIMATED TOTAL NUMBER IN POPULATION ('000)

Households	19.5	17.6	25.9	23.8	19.1	15.8	121.8
Persons	38.5	56.2	84.5	87.0	68.6	59.6	394.3
Persons 18 years and over	28.5	30.9	52.5	50.2	43.4	39.8	245.4

AVERAGE NUMBER OF PERSONS PER HOUSEHOLD

Males	0.82	1.48	1.66	1.86	1.88	2.04	1.62
Females	1.16	1.71	1.60	1.78	1.71	1.74	1.62
Persons	1.97	3.19	3.26	3.65	3.58	3.77	3.24
Children—							
Under 2 years	0.03	0.16	0.13	0.13	0.07	0.09	0.11
2 and under 5 years	0.16	0.18	0.22	0.26	0.21	0.16	0.20
5 and under 18 years	0.32	1.10	0.88	1.15	1.03	1.00	0.91
Adults—							
18 and under 65 years	0.86	1.32	1.87	1.94	2.19	2.52	1.78
65 years and over	(a) 0.61	(a) 0.44	(a) 0.16	(a) 0.17	(a) 0.07	(a) 0.00	0.24
Persons working	0.16	0.82	1.10	1.43	1.86	2.44	1.27
Retired persons	(a) 0.45	(a) 0.18	(a) 0.14	(a) 0.08	(a) 0.05	(a) 0.00	0.15

Household Expenditure, etc. by Household Income, Tasmania, 1975-76—continued

Particulars	Weekly household income group						
	Under \$80	\$80 and under \$140	\$140 and under \$200	\$200 and under \$260	\$260 and under \$340	\$340 and over	All households
AVERAGE WEEKLY HOUSEHOLD EXPENDITURE AND INCOME (\$)							
Current housing costs (b)	9.29	16.34	19.08	17.55	22.47	26.68	18.34
Fuel and power	3.76	3.07	5.20	4.62	4.52	5.01	4.42
Food—							
Bread, cakes and cereals	2.98	3.36	3.61	4.21	4.26	4.23	3.77
Meat and fish	5.07	6.06	8.05	8.18	10.07	10.01	7.88
Dairy products, oils and fats	3.54	4.01	4.98	5.27	5.75	6.78	5.02
Fruit and vegetables	2.19	3.39	4.15	4.34	5.10	6.23	4.18
Miscellaneous food	2.61	4.49	4.89	5.76	6.95	6.46	5.17
Meals out and take-away foods	1.67	3.03	4.32	5.22	6.87	12.34	5.33
Total food	18.07	24.34	30.01	32.97	39.00	46.05	31.35
Alcohol and tobacco	1.96	5.41	9.25	9.64	12.20	16.70	9.03
Clothing and footwear	4.18	8.58	17.55	13.13	19.60	28.69	15.01
Household equipment and operation	7.03	7.50	19.22	23.94	28.12	26.82	18.88
Medical care and health expenses	1.12	3.53	4.35	4.79	6.53	6.74	4.45
Transport and communication	13.40	14.50	46.72	30.08	44.12	65.26	35.47
Recreation and education	3.36	9.71	17.42	9.80	19.41	26.03	13.99
Miscellaneous goods and services	3.54	7.41	10.26	10.45	17.94	37.37	13.53
Total expenditure (c)	65.69	100.40	179.06	156.98	213.93	285.34	164.48
Selected other payments—							
Income tax	1.63	9.12	19.44	27.50	37.81	73.56	26.58
Other	(a) 3.98	(a) 0.30	(a) 12.94	(a) 6.00	(a) 25.03	(a) 47.13	14.66
Total payments	71.30	109.82	211.44	190.48	276.77	406.03	205.72
Average weekly household income	56.24	113.21	166.49	226.75	297.88	448.08	210.11

(a) Subject to large sampling error and should be treated with caution.

(b) Includes principal and interest components of any housing loan repayments but excludes outright purchase or deposit on dwellings or land, or other capital payments, which are included in 'other payments'.

(c) Excludes 'other payments'.

INCOME TAX RATES

Introduction

As noted in Chapter 5, income tax was first introduced in Australia in the colony of South Australia in 1884 and by 1915 had been adopted by all state governments and the Federal Government. Uniform income taxation throughout Australia was first adopted in 1942 when the Federal Government became the sole authority levying this tax. This continued until 1977-78 when, under new federal-state income tax sharing arrangements each state was given the right to impose a surcharge or grant a rebate on personal income tax levied in its state.

This section sets out income tax rates that apply to companies and details of the personal income tax system. (The 1977 Year Book included an outline of personal income tax in Australia for the period 1954-55 to 1976-77.)

Taxable Income: Expenses incurred in producing assessable income, certain specified deductions and losses incurred in previous years may be allowable deductions in calculating taxable income.

Company Income Tax

For the income years 1976-77 and 1977-78, company tax rates were set at 41 per cent of taxable income for non-profit friendly society dispensaries and 46 per cent for all other companies; the respective tax rates for friendly society dispensaries and other companies were 37.5 and 42.5 per cent for both the income years 1974-75 and 1975-76.

It is noted that the tax payable by companies during the financial year 1978-79 is based on income derived during the year ended 30 June 1978 or substituted accounting period.

Introduction of Trading Stock Valuation Adjustment

The Income Tax Assessment Amendment Bill 1977 inserted a new subdivision—Subdivision BA of Division 3—in the *Income Tax Assessment Act* for the purpose of authorising deductions by way of trading stock valuation adjustments. The broad strategy of the adjustments scheme is to allow taxpayers who carry on a business a special deduction from their assessable income. This is related to the value of specified trading stock on hand at the commencement of the year of income. The deduction is ascertained by applying to the value of that trading stock, a percentage equal to one-half of the percentage increase in the index for the goods component of the Consumer Price Index between the June quarter of the year preceding the year of income and the June quarter of the year of income. The deduction is available in respect of the year of income that commenced on 1 July 1976 and subsequent years. This system was intended to reduce the artificial increase in taxable income due to inflation.

Introduction of Personal Tax Indexation

In a statement read to the House of Representatives on 20 May 1976, the Federal Treasurer announced the introduction of full personal income tax indexation from 1 July 1976. Tax indexation was to be applied for income years ending on 30 June on the basis of the percentage change in the Consumer Price Index (for the six state capitals) for the latest year ended 31 March over the preceding year ended 31 March, adjusted to offset the effect of changes in indirect taxes on the index. (The Consumer Price Index number for a year ending 31 March is the average of the four quarterly C.P.I. numbers for that year.) Indexation changes were to be applied in respect of the tax scale (taxable income brackets), the general (minimum) concessional tax rebate, dependant rebates and the maximum separate net income which does not affect dependant rebate levels.

The Rationale For Tax Indexation

The aim of tax indexation is to ensure that income tax, as a proportion of income, remains unchanged from one year to the next for a person whose income keeps pace exactly with price rises as measured by the Consumer Price Index (adjusted to offset the effect of changes in indirect taxes). It therefore ensures that tax remains constant in *real* terms for a person whose income remains constant in *real* terms. (This has not in fact occurred fully under the system adopted in Australia as the indexation provisions have not applied to the maximum limits applying to items of concessional (rebatable) expenditure. Also, with the introduction of indexation for the 1976-77 income year, tax rebates, which had previously applied in respect of dependent children,^o were abolished. This was offset by significant increases in family allowance payments (see Chapter 15) payable in respect of dependent children but the amounts involved have *not* been subject to indexation adjustments to take account of inflation.)

Personal Income Tax 1977-78

The Pre-Budget Scheme

For 1977-78, the 1976-77 personal income tax scheme was subject to indexation and the resultant new scales affected P.A.Y.E. tax deductions until February 1978. The initial indexation of personal income tax for 1977-78 involved application of an indexation adjustment of 10.9 per cent to the previously existing tax brackets and dependant rebates. Indexation raised the general (minimum) concessional rebate to \$676 (equivalent to concessional expenditure of \$1 690). The maximum amount of concessional (rebatable) expenditure allowed in respect of residential rates, life assurance, etc. were *not* indexed. Allowable concessional expenditure in excess of \$1 690 attracted a rebate of 40 cents in the dollar.

Changes to the Scheme

The 1977-78 Federal Budget (introduced on 16 August 1977) included provisions for significant changes to the personal income tax system. A new tax rate scale was introduced which was used as the basis for calculating P.A.Y.E. deductions from 1 February 1978. The general concessional rebate of \$676 was abolished; the only concessional expenditure to attract a rebate was that in excess of \$1 590 at a reduced rate of 32 cents in the dollar. The actual effective rates of tax for 1977-78 were a composite of those for this new scheme and the pre-Budget scheme (details are set out in the 1978 *Year Book*). The maximum amounts that could be included as concessional expenditure for specified types of expenditure, dependant rebates and the sole parent rebate remained unchanged. The next table shows the new tax scales applying from 1 February 1978 together with details of tax payable if these rates were to operate for a full year:

New Rates of Tax Applying from 1 February 1978

Taxable income (a) bracket	Marginal tax rate (b)	Gross tax (c)	
		On income in bracket specified in first column	Cumulative (i.e. on higher figure in first column) (d)
\$	cents per \$	\$	\$
1—3 750	—	—	—
3 751—16 000	32	3 920	3 920
16 001—32 000	46	7 360	11 280
Over 32 000	60	..	..

- (a) Gross income less: expenses incurred in earning that income; subscriptions to trade, business or professional association or union; gifts to approved funds or institutions; and deduction (if allowable) in respect of housing loan interest.
- (b) Marginal rate payable in respect of each dollar in the range specified.
- (c) Gross tax applicable if the rates specified were to apply for a full year.
- (d) Subject to reduction (if applicable) by: (i) 32 per cent of total concessional (rebatable) expenditure in excess of \$1 590; and (ii) tax rebates in respect of dependants.

Personal Income Tax 1978-79

The August 1977 Federal Budget provided for full automatic indexation of income tax brackets and dependant rebates to continue *except* for the income year 1978-79. For that year only half indexation was to apply to the tax brackets. The full indexation factor of 1.076 was applied to dependant rebates while the income tax brackets shown in the last table were adjusted by a factor of 1.038. The indexation factor was derived from the percentage increase in the Consumer Price Index (for the six state capitals combined) for the year ended 31 March 1978 over the year ended 31 March 1977, adjusted to discount the effect of indirect taxes. (The price index numbers for the years ending 31 March 1977 and 1978 were 213.2 and 236.5, respectively, giving a non-discounted increase of 10.9 per cent). Under indexation, new rate scales following an indexation adjustment comprise adjusted tax brackets with the same respective tax rates applying as previously. However, the 1978-79 Federal Budget (introduced on 15 August, 1978) increased all tax rates apart from the zero rate by a surcharge of 1½ cents in the dollar. This was stated to be a temporary measure for 1978-79 only. As a result, P.A.Y.E. deductions were increased from 1 November, 1978.

1978-79 Tax Rates

The following table shows the tax scales applying for the 1978-79 income year:

Income Tax Rates, 1978-79

Taxable income (a) bracket	Marginal tax rate (b)	Gross tax	
		On income in bracket specified in first column	Cumulative (i.e. on higher figure in first column) (c)
\$	cents per \$	\$	\$
1—3 893	—	—	—
3 894—16 608	33·5	4 259·53	4 259·53
16 609—33 216	47·5	7 888·80	12 148·33
Over 33 216	61·5	..	..

(a) Gross income less: expenses incurred in earning that income; subscriptions to trade, business or professional association or union; gifts to approved funds or institutions; and deduction (if allowable) in respect of housing loan interest that does not accrue on or after 1 November 1978.

(b) Marginal rate payable in respect of each dollar in the range specified.

(c) Subject to reduction (if applicable) by (i) 33½ per cent of total concessional (rebatable) expenditure in excess of \$1 590; (ii) tax rebates in respect of dependants, housekeeper or sole parent; (iii) Zone A rebate of \$216 plus 25 per cent of rebates for dependants, including notional rebates for dependent children and students, or Zone B rebate of \$36 plus 4 per cent of rebates for dependants including notional rebates for dependent children and students; and (iv) a rebate of 30 cents for each dollar of paid-up capital subscribed to certain petroleum exploration and mining companies.

Dependant and Sole Parent Rebates

The dependant and sole parent rebates for 1978-79 are 7·6 per cent above those that applied for 1977-78 and are shown below:

Dependant and Sole Parent Rebates, 1978-79

Dependant	Maximum tax rebate (a)
	\$
Dependent spouse or daughter-housekeeper	597
Housekeeper (b)	597
Parent or parent-in-law	539
Invalid relative	270
Sole parent (c)	417

(a) Reduced proportionately if dependant was only dependent upon the taxpayer for part of the year. Each rebate, except the sole parent and housekeeper rebate, is reduced by one dollar for every four dollars by which the dependant's separate net income exceeds \$203.

(b) Allowable, subject to certain other conditions, only if no daughter-housekeeper or sole parent rebate claimed.

(c) Allowable to a sole parent if neither a daughter-housekeeper nor a housekeeper rebate is claimed.

Concessional Rebates

The maximum concessional expenditure limits have remained unchanged since 1975-76 with the exception of health insurance contributions (see note (a) to the next table). For the income years 1975-76 and 1976-77, a concessional rebate of 40 per cent of *all* allowable concessional expenditure applied, including *minimum* concessional tax rebates of \$540 and \$610 for 1975-76 and 1976-77, respectively. However, for the years 1977-78 and 1978-79 the concessional rebate was reduced to 32 per cent and 33½ per cent, respectively, of concessional expenditure in excess of \$1 590. The maximum amounts of concessional (rebatable) expenditure in respect of qualifying items are shown in the following table:

Personal Income Tax: Concessional Expenditure Limits, 1975-76 to 1978-79

Particulars	Maximum rebatable expenditure
Rates and land taxes on principal residence	\$ 300
Health insurance costs	(a)
Direct medical, dental, optical, etc. expenses (b) (c)	no limit
Funeral expenses (b)	100 (per dependant)
Life insurance premiums plus superannuation contribution (d)	1 200
Education expenses (e)	250 (Per student)
Self-education expenses	250
Adoption expenses	no limit
Calls paid on shares in afforestation companies	$\frac{1}{3}$ amount paid

- (a) For the income year 1975-76 there was no limit on subscriptions paid to registered medical and hospital benefits funds for the personal benefit of a taxpayer, his spouse or children. However, for 1976-77 such subscriptions allowable as rebatable concessional expenditure were limited to: (i) amounts paid by a taxpayer between 1 July 1976 and 1 October 1976 for cover up to 1 October 1976; and (ii) amounts paid prior to 1 October 1976 giving entitlement beyond that date in respect of cover in excess of 'standard' medical and hospital cover. Health insurance contributions paid after 1 October 1976 are not allowable concessional expenditure subject to rebate.
- (b) In respect of a resident taxpayer and/or his 'dependants' who are residents.
- (c) Net of refunds.
- (d) For benefit of the taxpayer, or the spouse or child of the taxpayer.
- (e) In respect of the taxpayer's child or other dependant under 25 for whom the taxpayer is entitled to a rebate or notional rebate.

TOURISM

This section, apart from the 'Tourist Industry' and 'Tourist Accommodation Statistics', has been contributed by the Department of Tourism.

Introduction

In that it is an island, with relatively short distances separating population centres, Tasmania is unique among the Australian States. The populated areas of the State are serviced by a main road network of a high standard and, in addition, the scenery and topography (see also the section 'Physiography' in Chapter 2) is fascinatingly varied. Without travelling for any great distance one can encounter long white beaches, coastal heaths and sand dunes, dense rain forests, rugged mountains, alpine moors and snow country, undulating hill country, fertile river valleys, numerous lakes and rivers, lush green pastures, orchards, convict ruins, many fine examples of early colonial architecture and extensive hydro-electric developments. Angling, bushwalking and caverneering are strong attractions for enthusiasts. As a result, tourism is of great importance to Tasmania and is vigorously promoted.

Visitors to the State

During 1977-78 almost 550 000 paying passengers travelled to Tasmania, including about 220 000 returning Tasmanian residents. Over the past four years, monthly passenger arrivals have conformed to a marked seasonal pattern, distinguished by an accentuated trough in July, a major peak in January, and minor peaks in October and April.

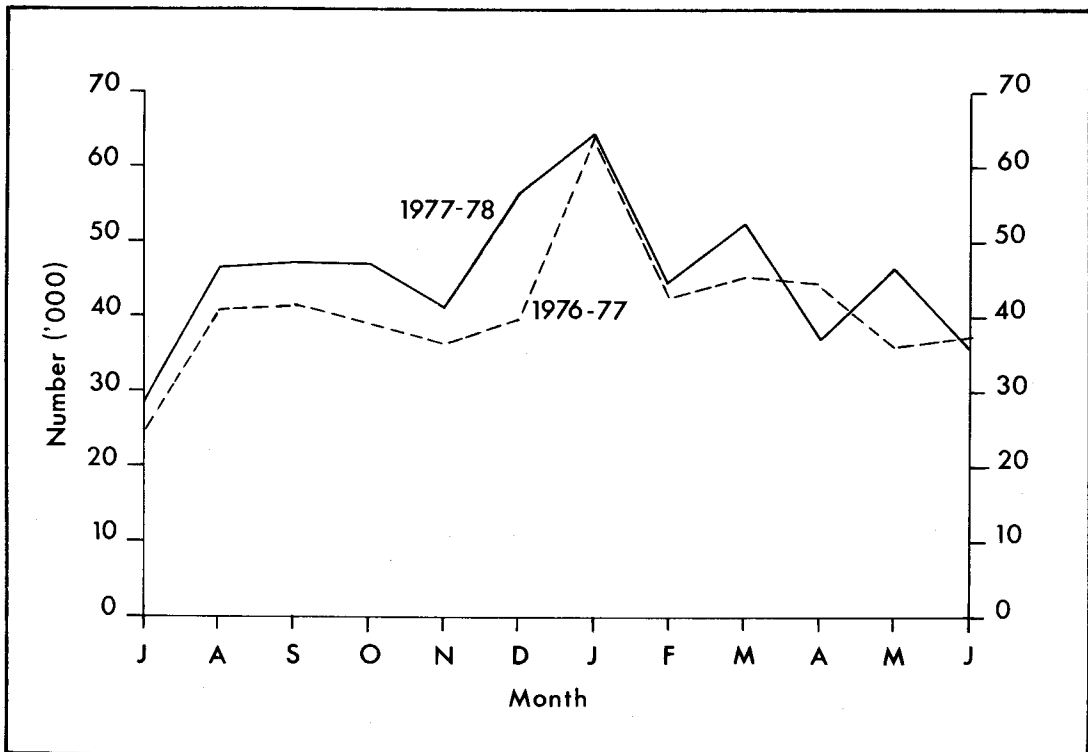
Excluding returning Tasmanians, it is estimated that of the 330 000 visitors travelling to Tasmania each year, around 265 000 come purely for holiday purposes. The remainder, who visit the State for other reasons, often extend their stay by several days to enjoy Tasmania's tourist attractions.

Approximately 66 per cent of visitors (around 218 000) enter Tasmania via the main northern points of entry—Wynyard, Devonport and Launceston. A popular form of holiday is to travel around the State via the north coast, east coast, Midlands, Derwent Valley and west coast highways. The next table shows passenger arrivals dissected by month and port of entry for 1977-78.

Passenger Arrivals, 1977-78
(Source: Department of Tourism)

Month	Port of entry								Total
	Hobart	Laun- ceston	Wynyard	Devonport			King Is.	Flinders Is.	
				By air	By sea	Total			
July	13 049	8 603	2 260	2 134	2 304	4 438	333	31	28 714
August	17 870	15 380	3 785	3 555	5 326	8 881	609	74	46 599
September	20 312	14 328	4 525	3 982	3 412	7 394	703	63	47 325
October	20 025	14 110	3 537	2 839	6 184	9 023	572	40	47 307
November	15 384	13 888	2 956	2 621	5 559	8 180	676	50	41 134
December	21 056	18 655	4 780	5 497	5 876	11 373	737	139	56 740
January	24 425	23 291	5 189	6 292	4 458	10 750	1 045	195	64 895
February	17 719	14 238	3 303	2 939	5 252	8 191	587	72	44 110
March	20 928	17 783	3 991	4 134	4 752	8 886	682	78	52 348
April	14 386	11 723	2 750	2 252	5 343	7 595	523	45	37 022
May	19 082	15 692	3 661	3 158	4 454	7 612	711	69	46 827
June	16 421	9 921	3 411	2 774	2 862	5 636	542	33	35 964
Total	220 657	177 612	44 148	42 177	55 782	97 959	7 720	889	548 985

Passenger Arrivals, Tasmania, 1976-77 and 1977-78



Almost all vehicle traffic and passenger sea traffic from the mainland to Tasmania is between Melbourne and Devonport on the Australian National Line's 'sea-road' service. The next table shows details of Bass Strait vehicle and passenger sea traffic from Melbourne to Devonport for 1977-78 by month.

Bass Strait Vehicle and Passenger Sea Traffic: Melbourne to Devonport 1977-78

Month	Motor vehicles	Caravans and trailers	Passengers
July	723	36	2 304
August	1 502	56	5 326
September	963	47	3 412
October	1 698	89	6 184
November	1 554	58	5 559
December	1 547	120	5 876
January	1 090	50	4 458
February	1 492	57	5 252
March	1 309	65	4 752
April	1 525	54	5 343
May	1 209	38	4 454
June	792	29	2 862
Total	15 404	699	55 782

Campervans: The use of campervans, hired on arrival in Tasmania, is growing in popularity with holiday visitors. At 30 June 1978, 251 campervans were licensed by the Transport Commission as hire and drive vehicles; 189 factory-new campervans were registered by the Commission during 1977-78 (119 for use as hire and drive vehicles and 70 for private use).

Department of Tourism

The Department of Tourism is responsible for the development of Tasmania as a tourist destination. It pursues this objective through the provision of travel information and services for tourists, direct promotional activities, the provision of financial assistance for approved tourism development projects, the registration of all categories of commercial accommodation, regulation of the erection of certain types of road-side signs in non-urban areas and through research into specific aspects of Tasmania's tourist industry.

Tourist Promotion

The Department is currently expanding its promotional and publicity activities. In 1977-78 direct expenditure on these activities amounted to \$693 000, an increase of 19.5 per cent over the expenditure of \$580 000 in the previous year. National campaigns conducted in spring and autumn incurred an expenditure of about \$320 000.

The sales arm of the Department consists of the Tasmanian Government Tourist Bureaus which are located at Hobart, Launceston, Devonport, Burnie, Queenstown, Melbourne, Canberra, Sydney, Brisbane and Adelaide. These bureaus display promotional material relating to Tasmania, disseminate Tasmanian tourist information, answer specific inquiries, organise and sell package tours within the State, and assist and act as agents for other travel organisations which provide tourist services to and within Tasmania. In turn, the bureaus are represented throughout Australia, in New Zealand and in Papua New Guinea, by some 870 accredited travel offices.

During 1977-78, the sales receipts of all bureaus amounted to \$19 028 067, of which 65 per cent was generated outside Tasmania. This represents an increase of over 12 per cent on receipts of \$16 942 065 for the previous year. Receipts of the mainland bureaus increased by \$1 373 321 compared with an increase of \$702 682 in receipts of the Tasmanian bureaus.

The Department also promotes capital investment in tourist accommodation, transport and facilities by providing loans, guarantees and grants for approved projects. During 1977-78, the Minister for Tourism and the Environment approved 10 loans totalling \$1 238 332 for tourist projects. In addition, 50 grants to a value of over \$260 000 were made to municipal

councils, sporting bodies and other organisations for tourism promotional activities and development projects throughout the State, including seven grants totalling almost \$183 000 for the development of caravan parks at Wynyard, Strahan, Bruny Island, Port Cygnet, Ulverstone, George Town and Scottsdale.

Accommodation Standards

Under Section 16 of the *Tourism Act 1977*, the Department of Tourism is responsible for the registration of accommodation houses which can be classified as motels, guest houses, holiday flats, holiday cabins, caravan parks and tourist caravan parks. Such premises are required to conform to minimum standards of quality relating to health and hygiene, safety and facilities. (Registration is also extended to premises licensed under the *Licensing Act 1976*.) During 1977-78, 65 inquiries were received regarding proposals for the establishment of new premises. The Department received 40 complaints against registerable premises, and a total of 285 inspections were made.

At 30 June 1978, there were 235 registerable accommodation houses in Tasmania (excluding hotels), of which 225 had been granted full or provisional registration or exemption from registration by the Department of Tourism. Statistics relating to 'tourist accommodation establishments' are included in a later section.

Eighty-four caravan parks and camping grounds throughout the State are registered with the Department, providing more than 2 800 powered sites. Almost all provide communal washing and toilet facilities, and showers. More than half are owned and operated by municipal councils.

Research

On 1 January 1978, the Department of Tourism commenced its 12-month Tasmanian Visitor Survey. This survey, conducted with the assistance of the Australian Bureau of Statistics, is based on a 2.7 per cent systematic sample of passengers departing from Tasmania. The objectives of the survey are to up-date the 'Survey of the Tourist Industry in Tasmania' conducted by the State Treasury in 1968-69, to derive additional information on visitor characteristics and activities in Tasmania, and to provide basic information on out-of-State travel by Tasmanian residents.

Data for the first six months of the survey (January to June 1978) indicated that approximately 60 per cent of departing passengers were visitors to the State. Of these, some 80 per cent were travelling for holiday reasons. Approximately 5.5 per cent of visitors were of overseas origin. Of the visitors from mainland Australia, the majority (53.5 per cent) came from Victoria.

Almost 60 per cent of visitors had travelled to Tasmania on a previous occasion, and over 30 per cent had made more than three previous visits. Over 70 per cent went sightseeing or touring in Tasmania, two-thirds visited historic sights, more than 50 per cent visited the Wrest Point Casino, and 28 per cent went bushwalking or climbing. The average length of stay in the State was between 11 and 12 nights.

What impressed visitors most, according to the survey, was the friendliness of Tasmanian residents; they were least impressed with retail shop trading hours, the state of Tasmania's roads, and entertainment or night-life. However, the most common comment made by visitors was that they like Tasmania the way it is and do not want to see anything changed.

Other research undertaken during 1978 included preparatory work for a study of the economic impact of tourism in Tasmania, definition of the tourist industry, and estimating the potential markets for the Bass Strait vehicular ferry service and for a Tasmania-New Zealand air service.

The Tasmanian Tourist Council

Regional tourism interests in the various parts of the State are managed by local tourism councils, committees and associations which are members of, or affiliated with, the Tasmanian Tourist Council. This is an independent organisation representing the tourist industry. Through its wide membership and its long association with tourism in Tasmania, it provides a valuable link between local government, private enterprise and the State Government in matters concerning the development of the tourist industry.

The 'Tourist Industry'

In terms of the industrial structure of the economy there is no identifiable sector which can be regarded as the 'tourist industry'. The difficulty is that the provision of goods and services for tourists cannot generally be distinguished from the provision of goods and services for residents. Receipts from tourists for goods and services purchased contribute in varying degrees to the total receipts of a wide range of businesses. Tourists might, for example, be expected to use the services of the insurance industry or to purchase furniture to only a very limited extent whereas, at the other end of the scale, they would be major users of the services provided by the accommodation industry.

Rather than attempt to delineate a separate 'tourist industry' it is therefore much more meaningful to examine the 'tourist impact' on industries within the accepted industrial structure.

Probably the most effective way of measuring tourist impact is to interview suitable samples of tourists and ascertain the pattern and scale of their expenditures while on tour. From these data estimates can be made of total tourist impact on the purchases of goods and services. As mentioned earlier, the Department of Tourism, with assistance from the Bureau, conducted a survey of air and sea passengers departing from the State during 1978.

It is interesting to note that in his June 1977 report, 'Inquiry into the Structure of Industry and the Employment Situation in Tasmania' (page 49), which had been commissioned by the Federal Government, Sir Bede Callaghan stated:

'Tasmania's natural scenic attractions and areas of Australian historical interest provide it with the necessary qualities to sustain a tourist industry that is viable and that shows promise for further development.

'Many of those with whom I discussed tourism considered that further development of the industry will greatly help Tasmania's economic future. As discussed elsewhere in this report, however, I think resolution of the general difficulties of Tasmania will be broad-based, with inputs coming from a variety of industries. By the same token, tourism could have an important and increasing influence.

'Although it already affords a significant contribution, the importance of tourism relative to other sectors of the economy, and to the whole of Australia, is difficult to quantify as an adequate statistical base is not available. Both for policy formulation and administrative purposes, it is desirable that an adequate assessment of tourist traffic and expenditure patterns be collected. I recommend that the Tasmanian Government remedy this by periodic sample surveys.

'(Some estimates of expenditure and the impact on the economy have been made but their reliability is questionable.)'

A major part of tourist expenditure is on accommodation. Hence information obtained from establishments which provide accommodation for tourists will reflect tourist impact. It will, of course, also include expenditure by residents (e.g. public bar trade of licensed hotels). The next section contains statistics relating to Tasmanian accommodation establishments. (See also the section 'The Licensing Board' in Chapter 16.)

Tourist Accommodation Statistics

Census, 1973-74

Covering operations in the year 1973-74, the Bureau conducted its first census of tourist accommodation establishments which were defined as those which catered predominantly for short-term guests. The aim was to obtain a broad picture of this accommodation sector in the census year and also to provide the framework for subsequent occupancy surveys. Details of the results of the 1973-74 Census are contained in Chapter 18 of the 1977 *Year Book*.

Survey of Tourist Accommodation

Since the census of 1973-74, a survey of tourist accommodation has been conducted by the Bureau each quarter. Statistics are obtained in respect of each month in a particular quarter. The scope of the current survey is the same as that for the 1973-74 Census except for the omission of holiday flats.

The following definitions apply:

Licensed Hotel with Facilities: A tourist accommodation establishment which is licensed to operate a public bar, provides bath or shower and toilet in most guest rooms, and has breakfast available for guests.

Licensed or Unlicensed Motel, Private Hotel or Guest House with Facilities: (referred to as 'Motels, etc.' in tables): A tourist accommodation establishment which provides bath or shower and toilet in most guest rooms and has breakfast available for guests, but is not licensed to operate a public bar. This category also includes motels that are licensed to serve liquor with meals.

Caravan Park: A tourist accommodation establishment which provides powered sites for caravans, and toilet, shower and laundry facilities for guests.

Tourist Accommodation Establishment: There is no generally accepted definition of a tourist accommodation establishment but, for the purpose of the surveys, a tourist accommodation establishment has been defined as an establishment which provides accommodation of a predominately short term nature (i.e. for periods of less than two months) available to the general public. Note that data are collected and published for both long term and short term guests at these establishments.

East Coast: A tourist area comprising the municipalities of Spring Bay and Glamorgan (in the Southern Division), and Fingal and Portland (in the Northern Division).

The following table shows details of the survey for the 12 months ended 30 June 1978:

**Hotels, Motels, etc. (a) With Facilities: Details by Statistical Division,
Twelve Months Ended June 1978**

Period	Hobart	Southern	Northern			Mersey-Lyell			Total Tasmania	East Coast
			Tamar	North Eastern	Total	North Western	Western	Total		

NUMBER AND CAPACITY

	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.
1978, June qtr—										
Establishments	40	11	30	7	37	28	6	34	122	12
Guest rooms	1 444	254	825	213	1 038	687	205	892	3 628	331
Bed spaces	3 482	743	2 146	579	2 725	1 860	552	2 412	9 362	1 018

PROPORTION OF ROOMS OCCUPIED TO ROOMS AVAILABLE (per cent)

1977—July	47.3	21.5	42.7	21.1	37.9	34.0	31.3	33.4	39.4	22.0
Aug.	58.1	40.5	55.7	39.5	52.1	41.5	48.2	43.0	51.3	39.6
Sept.	58.2	44.4	53.4	36.1	49.5	44.1	47.8	44.9	51.6	40.4
Oct.	70.2	44.3	59.4	43.9	55.8	45.8	64.7	50.0	59.3	44.8
Nov.	67.7	49.9	61.3	51.4	59.0	51.8	74.1	56.8	61.3	50.5
Dec.	52.5	42.2	43.8	45.6	44.2	45.1	55.5	47.5	48.3	45.2
1978—Jan.	80.9	79.6	57.2	74.0	60.6	69.1	88.6	73.6	73.2	83.8
Feb.	66.2	58.8	58.3	52.4	57.1	60.3	77.0	64.1	62.6	60.2
March	78.3	60.3	59.4	57.0	58.9	59.8	82.3	65.0	68.2	62.8
April	64.3	49.6	48.8	43.8	47.8	48.1	70.4	53.2	55.8	48.9
May	62.3	38.6	45.5	35.5	43.5	44.7	53.6	46.8	51.4	37.0
June	47.2	25.6	35.2	29.7	34.1	37.7	32.7	36.5	39.3	27.2

PROPORTION OF BEDS OCCUPIED TO BEDS AVAILABLE (per cent)

1977—July	32.2	14.1	25.0	13.2	22.2	18.8	17.0	18.4	24.4	13.2
Aug.	42.4	29.5	34.7	26.2	32.7	24.9	34.9	27.1	34.7	26.7
Sept.	42.5	31.6	34.2	24.0	31.8	27.4	33.2	28.7	35.1	26.8
Oct.	47.7	30.6	38.7	27.9	36.0	27.0	44.4	30.9	38.7	28.3
Nov.	46.8	34.4	40.2	33.8	38.6	31.9	52.4	36.4	40.9	32.8
Dec.	37.4	31.4	29.0	29.1	29.0	31.9	40.7	33.9	33.7	29.8
1978—Jan.	63.1	65.3	43.6	60.0	47.1	51.1	68.8	55.2	56.6	65.9
Feb.	46.7	45.7	36.9	35.1	36.5	39.8	53.5	43.0	42.7	42.5
March	58.2	44.4	39.7	38.8	39.5	39.8	57.2	43.8	48.0	42.2
April	41.5	33.1	31.2	28.4	30.6	28.3	48.6	33.0	35.5	30.5
May	41.9	28.4	29.1	24.5	28.1	27.4	38.4	29.9	33.7	25.2
June	32.0	18.9	21.7	19.3	21.2	21.1	22.3	21.4	25.1	18.7

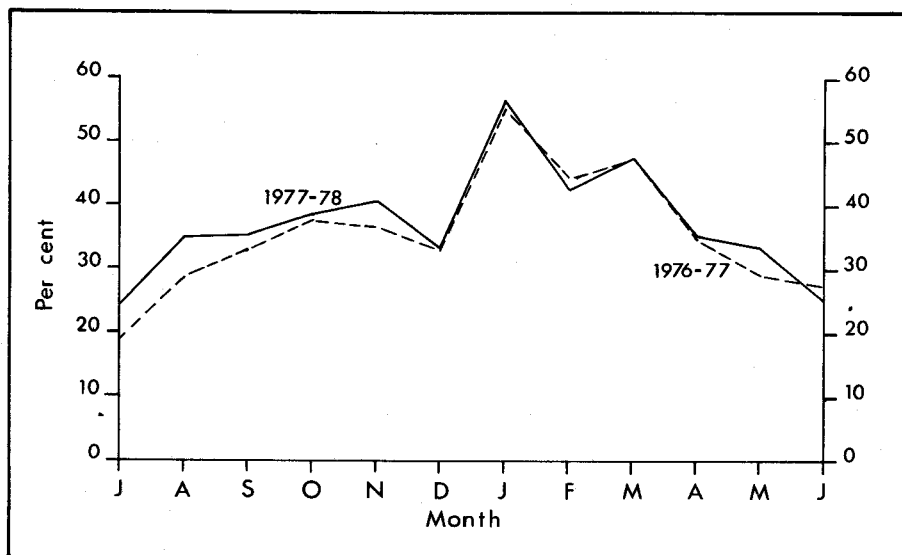
**Hotels, Motels, etc. (a) with Facilities: Details by Statistical Division,
Twelve Months Ended June 1978—continued**

Period	Hobart	Southern	Northern			Mersey-Lyell			Total Tas- mania	East Coast
			Tamar	North Eastern	Total	North Western	Western	Total		
TAKINGS FROM ACCOMMODATION (\$'000)										
1977—July	684	32	176	20	196	136	35	171	1 083	38
Aug.	812	59	223	38	261	162	59	221	1 354	74
Sept.	757	71	220	38	258	182	61	243	1 329	79
Oct.	761	72	268	52	320	196	89	285	1 438	95
Nov.	711	83	274	60	334	222	99	321	1 448	109
Dec.	584	79	226	57	283	204	85	288	1 235	104
1978—Jan.	956	163	360	107	467	326	142	468	2 054	219
Feb.	688	114	317	62	380	252	107	360	1 541	139
March	906	116	351	78	429	281	126	407	1 858	152
April	727	82	285	57	342	213	109	321	1 472	109
May	745	71	276	48	323	215	84	298	1 438	89
June	528	46	205	37	241	156	47	203	1 018	66

EMPLOYMENT AT 30 JUNE 1978 (persons)										
Full time—										
Males	463	26	94	21	115	82	11	93	697	35
Females	293	17	77	22	99	76	12	88	497	29
Part time—										
Males	196	23	65	17	82	80	8	88	389	21
Females	509	62	324	59	383	293	78	371	1 325	91
Total	1 461	128	560	119	679	531	109	640	2 908	176

(a) Establishments consisting predominantly of rooms which incorporate a bath or a shower and a toilet.

Bed Occupancy Rates: Accommodation Establishments with Facilities(a)



(a) Hotels, motels, etc. which provide a bath or shower, and a toilet in most guest rooms.

The next table gives number, capacity and occupancy details in respect of caravan parks for 1978 by statistical division (separate details for the North Western and Western Sub-divisions are not available for publication). Sites occupied by on-site vans are included.

**Caravan Parks: Details by Statistical Division,
Twelve Months Ended June 1978**

Period	Hobart	Southern	Northern			Mersey- Lyell	Total Tasmania	East Coast
			Tamar	North Eastern	Total			
NUMBER AND CAPACITY								
	No.	No.	No.	No.	No.	No.	No.	No.
1978, June quarter—								
Establishments	5	12	7	8	15	18	50	10
Powered sites	244	381	273	366	639	1 006	2 270	516
Total sites	435	998	491	922	1 413	1 563	4 409	1 112
PROPORTION OF SITES OCCUPIED TO SITES AVAILABLE (per cent)								
1977—July	25.7	2.8	21.0	1.8	8.0	14.5	10.8	2.0
Aug.	30.2	4.8	23.9	3.8	9.7	15.7	13.1	3.9
Sept.	31.6	5.7	28.4	6.1	12.2	20.0	15.9	5.4
Oct.	44.4	4.5	27.3	4.8	16.3	14.5	15.7	3.5
Nov.	50.5	7.5	27.4	7.9	17.8	16.4	18.3	6.4
Dec.	56.7	13.4	34.9	19.1	27.1	33.8	29.4	15.0
1978—Jan.	71.4	29.9	48.2	47.9	48.1	66.6	52.5	35.3
Feb.	49.8	16.7	37.0	24.1	30.6	38.4	31.8	16.8
March	57.5	17.1	41.0	20.0	30.7	20.2	26.2	16.7
April	39.4	6.0	35.3	4.9	15.4	16.5	16.0	5.1
May	36.2	6.0	35.1	3.6	14.5	15.2	15.0	5.0
June	33.0	3.9	30.8	3.4	12.9	12.9	12.9	4.2

Further References

A.B.S. Publications Produced by the Tasmanian Office

Population and Vital Statistics, Tasmania (3202.6), (quarterly, June Quarter 1978 issue released 2-11-78, 2pp; includes statistics of arrivals and departures to and from Tasmania)

Tourist Accommodation, Tasmania (8 603.6) (quarterly, June Quarter 1978 released 21-9-78, 7 pp)

Census of Tourist Accommodation Statistics, Tasmania (8 604.6) (irregular, 1973-74 released 29-8-75, 19 pp)

A.B.S. Publications Produced by the Canberra Office

Australian National Accounts, Preliminary Statement No. 2—Household Income by States (5202.0) (annual, 1976-77 released 21-3-78, 2pp)

Australian National Accounts—National Income and Expenditure (5204.0) (annual, 1976-77 released June 1978, 127pp)

Quarterly Estimates of National Income and Expenditure (5206.0) (quarterly, September Quarter 1978 released 5-12-78, 31pp)

Australian National Accounts—Gross Product by Industry at Current and Constant Prices (5211.0) (annual, 1976-77 released 14-9-78, 21pp)

Australian National Accounts—Outline of Principal Sources and Methods (5212.0) (released 31-7-78)

National Income and Expenditure (a Federal Budget paper) (5213.0) (annual, 1977-78 released 15-8-78, 32pp)

Household Expenditure Survey 1974-75—

Bulletin 1, An Outline of Concepts, Methodology and Procedures (6507.0) (82pp)

Bulletin 2, Preliminary Results (6508.0) (28pp)

Bulletin 3, Standard Errors (6509.0) (63pp)

Bulletin 4, Expenditure Classified by Income of Household (6510.0) (38pp)

Bulletin 5, Quarterly Expenditure Patterns (6511.0) (22pp)

Bulletin 6, Expenditure Classified by Household Composition (6512.0) (38pp)

Bulletin 7, Expenditure Classified by Selected Household Characteristics (6514.0) (48pp)

Household Expenditure Survey 1975-76—

Bulletin 1, Summary of Results (6516.0) (38pp)

Bulletin 2, Expenditure Patterns for Households of Differing Characteristics and Compositions (6517.0) (to be released in 1979)

Bulletin 3, Expenditure and Income by States and Territories (6518.0) (48pp)

Tourist Accommodation (8635.0) (quarterly, June Quarter 1978 released 6-10-78, 6pp)

Other Publications

- AUSTRALIA, PARLIAMENT. *Commissioner of Taxation, Reports* (annual). (Parl. Paper, Canberra).
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- AUSTRALIAN TOURIST COMMISSION. *Statistical Review 1977* (Melbourne, 1978).
- AUSTRALIAN TRAVEL RESEARCH CONFERENCE. *Survey of Australian Tourism, 1973-74*.
- BOYLES, R. G. *The Tasmanian Tourist Industry—The Measurement of Tourist Expenditure*, (B.Ec. (Hons.) thesis, University of Tasmania, 1971).
- BUREAU OF TRANSPORT ECONOMICS (W. N. Aplin and H. M. Flaherty). *Occasional Paper 5—Sampling Processes for the National Travel Survey*. (AGPS, Canberra, 1976). (Due to restrictions on Bureau resources, the National Travel Survey has been deferred.)
- HOUSE OF REPRESENTATIVES. 'Select Committee on Tourism', *Hansard*, 17 August 1978, pp. 5533-5614.
- Inquiry into the Structure of Industry and the Employment Situation in Tasmania*. Report by Sir Bede Callaghan C.B.E. (AGPS, Canberra, 1977). (Commissioned by the Federal Government in December, 1976.)
- PEAT, MARWICK, MITCHELL & CO., N.C.K. EVERS, URBAN SYSTEMS CORPORATION. *Southern Tasmania Tourist Development Plan* (1977). (Study commissioned in 1975 by the then Australian Department of Tourism and Recreation in conjunction with the Tasmanian Department of Tourism and Immigration.)
- STATE TREASURY, *Survey of the Tourist Industry in Tasmania*. (Hobart, 1969).
- TASMANIAN TOURIST COUNCIL. *Visitor Opinion Survey, November 1972 to October 1973. Tasmania, The Treasure Island—Official Visitors Guide*, 10th Edition. (Mercury Walch, Hobart, 1978).
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- TOURISM DEVELOPMENT AUTHORITY AND DEPARTMENT OF TOURISM AND IMMIGRATION. *Report for the Year 1976-77*. (Government Printer, Hobart, 1978).

Appendix A

STATISTICAL SUMMARY

In the next 29 pages, an historical summary of the more important statistics available that relate to Tasmania is shown. Only brief footnotes have been included and readers should refer to the relevant chapter of the *Year Book* for more detailed definitions. Naturally, the range of statistics for early years is very limited. Also, it should be borne in mind that perfect comparability over long periods of time is difficult to attain due to changes in definitions, scope of statistical collections, etc. While major breaks in series are shown, minor changes to series are not indicated and the statistics should be interpreted with this in mind.

Generally, the first year shown on each page is the earliest for which any series on that page is available. Due to space constraints, earlier details for some series are given only for either every five or ten years. Items included have been arranged in chapter order.

(Chapter 4)

Local Government Finance (\$'000)

Year	Value of ratable property			Revenue Fund— ordinary services and business undertakings		Loan Fund			
	Unimproved capital value (a) (b)	Total capital value (a) (b)	Assessed annual value	Revenue (c)	Expendi- ture (c)	Loan raisings	Expendi- ture	Total debt (b)	Annual interest liability
1929-30	46-17	101-40	5-51	1 954	1 956	227	212	6 502	n.a.
1939-40	46-16	109-82	6-10	2 174	2 192	212	230	6 712	300
1949-50	50-73	134-70	9-02	3 694	3 696	1 400	1 423	7 219	267
1950-51	55-86	155-35	10-24	4 283	4 327	1 860	1 594	8 534	304
1951-52	63-43	187-66	11-43	5 357	5 351	2 554	2 558	10 453	372
1952-53	69-93	224-91	12-87	6 024	6 048	2 184	2 166	11 900	444
1953-54	74-31	252-69	13-84	6 641	6 506	2 418	1 758	13 600	533
1954-55	83-58	296-37	15-88	6 972	7 053	2 796	2 408	15 603	639
1955-56	93-84	345-27	15-56	6 386	6 596	2 367	2 730	(d) 15 389	654
1956-57	130-13	495-31	25-42	7 417	7 261	2 310	2 682	16 967	761
1957-58	140-55	553-90	28-23	7 998	7 904	4 024	3 237	20 192	944
1958-59	164-66	653-48	33-41	8 837	8 837	3 685	3 541	22 979	1 111
1959-60	179-03	739-35	37-31	9 781	9 762	5 232	4 671	27 144	1 337
1960-61	185-93	808-21	40-04	10 867	10 924	5 277	5 259	31 285	1 571
1961-62	193-52	870-08	42-89	12 097	11 779	6 159	5 658	36 181	(e) 1 515
1962-63	216-01	942-88	48-62	13 765	13 256	5 268	7 212	39 842	1 897
1963-64	271-83	1 075-09	57-51	14 792	14 654	5 823	7 431	44 063	2 061
1964-65	290-52	1 140-40	61-27	16 250	16 176	6 237	6 354	48 368	2 209
1965-66	316-91	1 202-22	68-54	17 395	17 085	6 512	8 342	52 844	2 442
1966-67	328-50	1 271-87	72-47	19 594	19 068	6 981	8 091	57 611	2 893
1967-68	350-81	1 350-44	86-35	21 235	20 858	8 183	9 364	62 821	3 186
1968-69	374-49	1 452-38	95-57	23 478	22 790	7 633	8 616	66 922	3 496
1969-70	411-72	1 571-96	102-98	25 914	24 816	6 793	7 972	71 854	3 858
1970-71	441-88	1 691-37	107-78	28 236	27 195	6 964	7 494	75 752	4 149
1971-72	454-47	1 768-07	114-86	31 505	30 985	7 326	8 504	79 907	4 534
1972-73	483-44	1 874-17	124-61	37 000	34 552	8 151	9 668	84 781	4 865
1973-74	511-39	1 995-91	147-41	40 376	39 641	8 574	8 803	89 766	5 298
1974-75	619-19	2 317-03	165-47	52 313	52 224	12 260	12 677	97 892	5 951
1975-76	696-26	2 570-15	185-36	68 345	65 076	15 870	19 368	109 655	7 071
1976-77	763-67	2 902-51	218-86	75 711	68 467	17 775	20 548	122 950	8 655

(a) State Government valuation. (b) At 30 June. (c) Excludes loans. (d) As from 1955-56, the loan debt of Hobart and Launceston Corporations for tramways has been excluded and treated as a direct liability of the Metropolitan Transport Trust. (e) From 1961-62 actual interest payments.

(Chapter 5)

Consolidated Revenue Fund: Revenue and Expenditure (a)
(\$'000)

Year	Revenue	Expenditure	Budget result	Aggregate net deficit at end of year
31 December 1891.....	1 889	1 827	+63	497
31 December 1901.....	1 652	1 741	-89	487
1910-11.....	1 940	2 034	-94	490
1911-12.....	2 169	2 129	+40	450
1912-13 (b).....	2 413	2 192	+221	229
1913-14.....	2 476	2 470	+6	223
1914-15.....	2 488	2 768	-280	503
1915-16.....	2 753	2 681	+72	432
1916-17.....	2 739	2 826	-87	519
1917-18.....	3 006	2 919	+87	432
1918-19.....	3 164	3 289	-125	557
1919-20.....	3 630	3 657	-27	584
1929-30.....	5 379	5 430	-51	1 451
1930-31.....	5 219	5 709	-490	1 942
1931-32.....	4 771	5 314	-543	2 485
1932-33.....	5 044	5 155	-110	2 596
1933-34.....	5 396	5 492	-95	2 691
1934-35.....	5 744	5 983	-238	2 930
1935-36.....	6 235	6 495	-259	3 189
1936-37.....	6 977	6 887	+90	3 099
1937-38.....	7 280	7 266	+14	3 086
1938-39.....	7 230	7 281	-52	3 138
1939-40.....	6 111	6 106	+5	3 133
1940-41.....	5 843	6 206	-363	3 496
1941-42.....	6 717	6 714	+3	3 493
1942-43.....	6 581	6 800	-219	3 712
1943-44.....	6 997	6 937	+60	3 651
1944-45.....	7 313	7 351	-38	3 690
1945-46.....	7 867	8 068	-201	3 891
1946-47.....	9 014	9 147	-132	4 023
1947-48.....	10 156	10 204	-48	4 071
1948-49.....	11 288	11 691	-402	4 473
1949-50.....	13 882	14 165	-283	4 756
1950-51.....	15 831	16 324	-493	5 249
1951-52.....	20 386	21 490	-1 104	6 353
1952-53.....	22 922	23 526	-604	6 957
1953-54.....	26 502	26 840	-338	7 294
1954-55.....	29 877	30 614	-737	8 032
1955-56.....	34 389	35 792	-1 403	9 434
1956-57.....	37 889	39 543	-1 655	11 089
1957-58.....	43 210	43 228	-18	11 107
1958-59.....	45 520	45 518	+2	11 105
1959-60.....	50 542	50 657	-114	11 219
1960-61.....	54 054	54 167	-113	11 332
1961-62.....	61 191	61 352	-161	11 493
1962-63.....	64 018	64 019	-1	11 493
1963-64.....	69 167	69 021	+147	11 346
1964-65.....	76 012	76 465	-452	11 799
1965-66.....	84 453	85 585	-1 132	12 931
1966-67.....	91 486	93 248	-1 762	14 693
1967-68.....	100 463	102 413	-1 951	16 644
1968-69.....	109 526	111 540	-2 015	18 659
1969-70.....	120 619	121 004	-385	19 044
1970-71.....	135 829	138 207	-2 378	21 422
1971-72.....	156 432	160 237	-3 805	25 226
1972-73.....	181 866	185 998	-4 132	29 358
1973-74.....	206 947	210 097	-3 150	32 508
1974-75.....	268 522	282 065	-13 544	46 052
1975-76.....	322 091	317 947	+4 144	41 908
1976-77.....	396 617	395 033	+1 583	40 325

(a) From 1947-48 until 1971-72, the items 'Revenue' and 'Budget result' are shown adjusted according to the Special Grant Adjustment.

(b) System of annual Commonwealth Special Grants introduced.

(Chapter 5)

Aggregate Net Loan Expenditure and Public Debt

Year	Aggregate Net Loan Expenditure to End of Year							Public debt at end of year (a) (at mint par of exchange)	Annual interest liability at current rates of exchange	
	Purpose								Amount	Average rate
	Railways and transport	Hydro-electric works	Roads, bridges, harbours	School buildings and University	Housing advances and construction	Other	Total			
	\$'000	\$'000	\$'000	\$'000	\$'000	\$'000	\$'000	\$'000	\$'000	%
1890	6 508	—	3 354	238	—	2 282	12 382	12 866		
1900	7 820	—	5 352	334	—	2 986	16 492	17 022		
1910-11	8 866	—	7 258	488	—	5 034	21 646	22 156	n.a.	n.a.
1920-21	11 702	3 994	10 390	848	206	12 302	39 442	37 552		
1930-31	13 866	7 692	13 540	1 312	412	16 568	53 390	46 778		
1940-41	14 520	13 018	14 412	1 986	902	19 392	64 230	56 332		
1950-51	20 958	40 448	16 214	4 694	9 946	33 468	125 728	114 066	n.a.	3-1977
1960-61	31 126	181 578	35 076	27 266	29 536	87 422	392 004	354 558	n.a.	4-3845
1961-62	31 418	195 206	39 144	30 450	29 190	96 684	422 092	379 252	17 064	4-3948
1962-63	31 296	208 706	42 942	34 048	28 990	106 621	452 603	404 594	19 523	4-4585
1963-64	34 410	222 905	47 704	38 342	28 577	113 570	485 508	432 311	19 790	4-4634
1964-65	34 984	239 419	51 171	42 395	28 244	122 653	518 866	462 302	21 706	4-5890
1965-66	35 789	255 919	55 593	46 832	27 970	133 325	555 428	491 658	23 987	4-7693
1966-67	36 088	273 919	57 486	50 858	27 692	146 021	592 064	524 918	25 940	4-8432
1967-68	36 910	293 919	58 774	54 964	27 217	162 408	634 192	560 893	27 777	4-8879
1968-69	37 170	314 644	59 563	59 387	27 230	176 586	674 580	599 736	30 040	4-9517
1969-70	40 503	337 769	60 686	64 853	26 469	189 370	719 650	637 407	32 939	5-1163
1970-71	42 169	362 269	61 706	70 544	26 104	204 250	767 042	665 397	36 203	5-3928
1971-72	47 199	388 269	62 636	78 952	31 497	224 757	833 310	705 271	39 202	5-5220
1972-73	58 643	410 629	63 176	90 753	36 837	240 516	900 554	749 583	41 620	5-5300
1973-74	67 609	433 629	63 886	102 567	36 228	261 248	965 167	787 618	45 922	5-8300
1974-75	81 033	456 854	64 504	114 219	35 771	288 832	1 041 213	833 862	49 005	6-4100
1975-76	(b) 15 186	486 554	65 559	132 917	37 475	316 692	1 054 383	753 797	53 748	7-1300
1976-77	13 714	517 554	71 407	156 939	34 014	370 933	1 164 561	811 012	60 437	7-4500

(a) Expenditure under Commonwealth and State Housing Agreements is excluded from Public Debt.

(b) The Tasmanian Government Railways were taken over by the Australian National Railways Commission from 1 July 1975.

(Chapter 5)

Gross and Net Loan Expenditure

Year	Gross expenditure	Net expenditure	Revenue deficit funded (a)	Net Loan expenditure per head of population	Year	Gross expenditure	Net expenditure	Revenue deficit funded (a)	Net loan expenditure per head of population
	\$'000	\$'000	\$'000	\$		\$'000	\$'000	\$'000	\$
1900 to 1904-05 (b)	543	473	—	2-68	1946-47	5 899	2 725	239	10-70
1905-06 to 1909-10 (b)	571	519	—	2-78	1947-48	8 361	6 528	132	24-98
1910-11 to 1914-15 (b)	1 147	1 039	—	5-40	1948-49	11 051	9 013	488	33-82
1915-16 to 1919-20 (b)	2 004	1 549	—	7-84	1949-50	11 742	9 884	48	36-02
1920-21	6 181	5 435	—	25-68	1950-51	30 802	27 465	402	96-86
1921-22	5 377	4 292	—	19-98	1951-52	34 047	30 047	283	103-28
1922-23	3 422	2 307	699	10-68	1952-53	40 152	26 137	493	86-38
1923-24	2 752	1 492	—	6-88	1953-54	31 816	27 544	1 104	89-00
1924-25	1 907	496	—	2-30	1954-55	35 310	29 378	604	93-96
1925-26	2 226	1 138	—	5-30	1955-56	35 213	27 048	338	84-98
1926-27	2 290	659	—	3-08	1956-57	23 544	22 039	737	67-88
1927-28	2 068	809	—	3-78	1957-58	23 390	21 666	1 403	33-26
1928-29	2 059	698	—	3-22	1958-59	27 610	25 112	1 655	74-16
1929-30	2 932	294	—	1-34	1959-60	29 130	26 443	18	76-84
1930-31	(c) 2 921	(c) 1 651	—	7-40	1960-61	33 865	30 611	—	87-38
1931-32	1 319	193	—	0-86	1961-62	32 521	30 088	112	84-60
1932-33	887	-147	—	-0-64	1962-63	33 332	30 511	113	84-58
1933-34	1 050	238	—	1-04	1963-64	35 354	32 905	161	90-32
1934-35	1 572	723	—	3-16	1964-65	35 816	33 352	—	90-65
1935-36	3 717	2 000	678	8-66	1965-66	39 411	36 573	—	98-46
1936-37	3 996	1 684	—	7-00	1966-67	40 161	36 636	306	98-15
1937-38	3 785	1 701	—	7-32	1967-68	46 054	42 128	1 132	111-62
1938-39	3 699	1 479	—	6-22	1968-69	44 458	40 164	1 762	105-02
1939-40	3 628	1 806	—	7-52	1969-70	49 411	45 069	—	116-67
1940-41	4 231	2 268	363	9-40	1970-71	52 079	47 393	—	121-75
1941-42	3 581	1 430	—	5-96	1971-72	73 037	66 268	4 350	169-22
1942-43	3 001	1 002	—	4-14	1972-73	76 813	67 243	2 378	170-67
1943-44	5 218	3 350	219	13-70	1973-74	73 947	64 603	3 805	162-60
1944-45	3 587	1 806	910	7-32	1974-75	90 060	76 056	7 282	189-15
1945-46	3 540	1 590	—	6-36	1975-76	98 818	81 369	—	200-32
					1976-77	126 223	110 178	9 400	269-31

(a) These amounts are included in both Gross and Net Loan Expenditure. The figures shown are a complete record of funded deficits since 1900.

(b) Annual average for the five-yearly period shown. (c) Includes \$1 233 000, the amount re-appropriated to provide for certain deferred revenue charges.

(Chapter 6)

Summary of Population at Census Dates (a) (b)

Particulars	Census Date							
	April 1921	June 1933	June 1947	June 1954	June 1961	June 1966	June 1971 (a)	June 1976
Population—								
Males	no. 107 743	115 097	129 244	157 129	177 628	187 390	196 442	201 512
Females	no. 106 037	112 502	127 834	151 623	172 712	184 045	193 971	201 356
Persons	no. 213 780	227 599	257 078	308 752	350 340	371 435	390 413	402 868
Masculinity (males per 100 females)	no. 102	102	101	104	103	102	101	100
Average annual increase since previous Census—								
Males	% 1.0	0.6	0.8	2.8	1.8	1.1	1.0	0.5
Females	% 1.3	0.5	0.9	2.5	1.9	1.3	1.0	0.8
Persons	% 1.1	0.5	0.9	2.7	1.8	1.2	1.0	0.6
Age distribution of population—								
Under 16 years	no. 77 654	73 030	77 483	102 171	123 331	127 379	129 307	124 267
%	36.3	32.1	30.1	33.1	35.2	34.3	33.1	30.8
16 years and under 65 years	no. 126 055	138 515	159 925	183 230	200 001	214 981	230 069	243 885
%	59.0	60.9	62.2	59.3	57.1	57.9	58.9	60.5
65 years and over	no. 10 071	16 054	19 670	23 351	27 008	29 075	31 037	34 719
%	4.7	7.0	7.7	7.6	7.7	7.8	7.9	8.6
Religions of the population—								
Church of England	no. 112 222	105 228	123 158	147 407	159 101	166 023	169 089	158 749
Methodist	no. 27 171	26 470	33 358	38 236	42 236	43 084	42 173	37 107
Catholic (c)	no. 35 465	33 189	39 844	53 042	63 993	71 089	77 250	75 092
Presbyterian	no. 14 796	13 194	12 644	15 607	16 757	17 498	17 281	14 899
Baptist	no. 5 332	4 666	5 374	6 293	7 227	7 759	8 039	7 940
Congregational	no. 4 543	3 963	4 007	4 425	4 193	4 530	4 134	3 266
Churches of Christ	no. 1 935	1 892	2 039	2 267	2 507	2 701	2 500	2 188
Protestant (Undefined)	no. 2 271	1 979	1 661	2 157	1 975	1 924	4 243	3 455
Salvation Army	no. 1 357	1 142	1 612	1 815	2 316	2 661	3 176	2 880
Other Christian	no. 3 597	3 530	4 518	8 238	11 229	13 058	16 510	18 667
Total Christian	no. 208 689	195 253	228 215	279 487	311 534	330 327	344 395	324 244
Non-Christian	no. 245	87	173	256	268	485	561	779
Indefinite	no. 520	373	797	796	1 766	2 275	993	2 223
No Religion	no. 399	159	506	516	775	2 020	44 464	27 625
No Reply	no. 3 927	31 727	27 387	27 697	35 997	36 328		47 998
Conjugal condition of the population—								
Never married—								
Under 15 years of age	no. 73 444	68 590	73 371	97 452	117 299	120 164	121 323	115 665
15 years of age and over	no. 54 297	61 009	53 912	54 890	58 039	64 365	65 213	70 229
Total never married	no. 127 741	129 599	127 283	152 342	175 338	184 529	186 536	185 894
Married	no. 76 482	86 014	114 625	139 801	157 110	167 421	181 855	185 056
Widowed	no. 8 874	10 954	12 933	14 030	15 563	16 959	18 621	19 340
Divorced	no. 118	416	1 319	2 002	2 329	2 526	3 401	5 868
Not stated	no. 565	616	918	577	(d)	(d)	(d)	(d)
Birthplaces of the population—								
Australia	no. 196 268	215 213	247 379	282 491	317 478	335 582	350 150	361 866
New Zealand	no. 1 356	1 201	1 030	1 112	1 128	1 237	1 550	1 801
United Kingdom and Republic of								
Ireland	no. 12 734	9 588	7 123	14 113	16 741	19 101	22 513	22 913
Netherlands	no. 9	11	13	2 340	3 556	3 367	3 183	2 916
Germany	no. 389	238	171	1 794	2 223	2 016	2 009	1 886
Italy	no. 37	92	64	974	1 536	1 448	1 485	1 423
Other European	no. 512	334	325	4 535	5 789	6 033	6 184	5 970
Other birthplaces	no. 2 475	922	973	1 393	1 889	2 651	3 339	4 095

(a) Full-blood aboriginals excluded from census data prior to 1971.

(b) As recorded. Not adjusted for under-enumeration.

(c) Includes Catholic and Roman Catholic.

(d) Conjugal condition was allocated prior to tabulation in all instances where this information was not stated.

(Chapter 6)

Population; Arrivals and Departures

Year	Estimated Population (a)							Arrivals	Departures	Annual Rate of Increase of Population (c)
	Total at 30 June	Mean: year ended 30 June	Mean: year ended 31 Dec.	Totals at 31 December						
				Persons	Males	Females	Masculinity (b)			
1820	no.	no.	no.	no.	no.	no.	no.	no.	no.	per cent
1825	n.a.	n.a.	n.a.	5 400	n.a.	n.a.	n.a.	n.a.	n.a.	—
1830	n.a.	n.a.	n.a.	14 192	10 979	3 213	342	n.a.	n.a.	21.26
1835	n.a.	n.a.	n.a.	24 279	18 108	6 171	293	n.a.	n.a.	11.35
1840	n.a.	n.a.	n.a.	40 172	28 749	11 423	252	n.a.	n.a.	10.59
1845	n.a.	n.a.	n.a.	45 999	32 040	13 959	230	n.a.	n.a.	2.75
1850	n.a.	n.a.	n.a.	64 291	43 921	20 370	216	n.a.	n.a.	6.91
1855	n.a.	n.a.	n.a.	68 870	44 229	24 641	179	n.a.	n.a.	1.37
1860	n.a.	n.a.	n.a.	69 962	38 680	31 282	124	n.a.	n.a.	0.32
1865	n.a.	n.a.	88 752	89 821	49 653	40 168	124	3 432	2 782	5.12
	n.a.	n.a.	93 111	93 967	50 549	43 418	116	3 597	3 691	0.90
1870 (d)	n.a.	n.a.	100 038	100 886	53 517	47 369	113	5 982	5 936	1.44
1875	n.a.	n.a.	104 000	103 739	54 678	49 061	111	6 535	8 083	0.55
1880	n.a.	n.a.	113 648	114 790	60 568	54 222	112	10 411	10 034	2.02
1885	n.a.	n.a.	127 763	128 860	67 712	61 148	111	14 822	15 228	2.33
1890	n.a.	n.a.	143 224	144 787	76 453	68 334	112	29 517	29 086	2.38
1895	n.a.	n.a.	153 701	154 895	80 485	74 410	108	18 767	19 357	1.35
1900	n.a.	n.a.	172 631	172 900	89 763	83 137	108	23 056	25 479	2.21
1905	183 351	183 834	184 478	186 385	95 947	90 438	106	31 116	33 311	1.52
1910	189 807	190 792	191 005	193 803	98 866	94 937	104	35 377	38 159	0.79
1915	195 370	196 320	196 238	197 536	98 653	98 883	100	39 767	44 764	0.38
1920	209 425	208 599	210 350	212 752	107 259	105 493	102	34 829	35 648	1.37
1925	213 991	215 997	215 552	219 364	110 172	109 192	101	40 227	43 757	0.70
1930	219 983	219 269	220 933	225 297	113 505	111 792	102	40 291	41 110	0.48
1935	228 988	229 339	229 867	233 423	118 124	115 299	102	42 470	42 912	0.63
1936	230 104	230 689	231 426	235 773	119 038	116 735	102	49 478	49 452	1.01
1937	233 203	232 651	234 463	239 570	121 136	118 434	102	52 514	51 468	1.61
1938	234 827	235 628	236 328	242 119	122 427	119 692	102	58 113	58 315	1.06
1939	237 419	237 637	238 845	243 256	123 194	120 062	103	(f) 59 330	(f) 60 893	0.47
1940	240 191	240 023	241 134	244 002	123 650	120 352	103	(f) 51 672	(f) 53 644	0.31
1941	239 677	241 009	240 389	242 135	122 153	119 982	102	(f) 49 348	(f) 53 865	-0.77
1942	240 913	240 358	241 087	242 437	122 440	119 997	102	(f) 42 463	(f) 44 834	0.13
1943	242 561	241 704	242 860	244 253	123 067	121 186	102	(f) 20 152	(f) 21 272	0.75
1944	245 616	244 178	245 618	246 889	124 293	122 596	101	n.a.	n.a.	1.08
1945	248 633	246 971	248 596	250 280	125 854	124 426	101	n.a.	n.a.	1.37
1946	251 998	250 309	252 192	254 570	128 007	126 563	101	(f) 24	(f) 159	1.71
1947 (d)	257 078	254 553	257 636	267 936	135 195	132 741	102	(f) 49 920	(f) 40 833	5.25
1948	261 206	261 202	263 445	273 401	138 843	134 558	103	112 666	110 490	2.04
1949	267 062	266 518	270 327	281 343	143 433	137 910	104	117 614	113 232	2.91
1950	275 902	274 493	278 785	290 333	147 103	143 230	103	127 709	122 333	3.20
1951	286 193	283 526	288 294	301 787	153 721	148 066	104	137 341	129 514	3.95
1952	296 299	293 340	298 361	309 558	157 702	151 856	104	130 583	126 979	2.57
1953	304 080	302 529	306 318	316 465	161 305	155 160	104	127 484	125 812	2.23
1954 (d)	308 752	309 416	311 055	319 218	162 393	156 825	104	126 976	128 424	0.87
1955	314 092	312 694	315 565	324 919	165 356	159 563	104	137 834	137 144	1.79
1956	318 470	318 309	321 039	331 340	168 695	162 645	103	143 104	141 686	1.98
1957	326 130	324 666	328 435	338 807	172 186	166 621	103	143 601	141 310	2.25
1958	333 066	332 046	335 382	343 898	174 465	169 433	103	141 814	141 995	1.50
1959	339 376	338 628	341 423	351 349	178 109	173 240	103	162 761	160 569	2.17
1960	343 910	344 111	346 913	355 969	180 511	175 458	103	182 537	183 513	1.31
1961 (d)	350 340	350 077	353 623	353 258	178 864	174 394	103	186 423	184 165	-0.76
1962	355 668	353 175	355 682	358 087	181 085	177 002	102	185 268	186 023	1.37
1963	360 727	358 180	360 590	362 799	183 330	179 469	102	198 443	199 918	1.32
1964	364 311	362 758	364 554	366 508	185 051	181 457	102	219 930	223 380	1.02
1965	367 905	366 366	367 970	369 608	186 483	183 125	102	248 964	249 617	0.85
1966 (d)	371 436	369 600	371 483	373 309	188 180	185 129	102	257 463	256 068	1.00
1967	375 244	373 321	375 397	377 841	190 369	187 472	102	270 934	271 812	1.21
1968	379 649	377 582	379 916	383 055	192 871	190 184	101	276 798	276 856	1.38
1969	384 893	382 710	385 079	386 998	194 788	192 210	101	296 186	297 069	1.03
1970	387 720	386 665	388 180	390 253	196 363	193 890	101	320 867	323 449	0.84
1971 (d) (e)	390 220	389 723	390 235	391 699	197 079	194 620	101	340 163	340 642	0.37
1972	392 235	391 627	392 378	394 001	198 024	195 977	101	356 689	355 512	0.59
1973	395 676	393 974	395 775	397 197	199 403	197 794	101	450 794	448 765	0.81
1974	399 303	397 338	399 563	402 459	201 688	200 771	100	502 813	502 649	1.32
1975	404 677	402 101	404 454	406 565	203 809	202 756	101	509 285	514 415	1.02
1976 (d) (e)	407 363	406 150	407 548	409 252	205 080	204 168	100	505 278	507 465	0.66
1977	410 590	409 095	410 588	412 065	206 273	205 792	100	532 558	530 584	0.69

(a) Prior to 1966 excludes Aborigines. (b) Number of males per 100 females. (c) The rate of increase during the previous 12 months or, in the years prior to 1936, the average rate of increase during the previous five years. (d) Census year. (e) Census results adjusted for under-enumeration. (f) Excludes troop movements.

(Chapter 6)

Births, Deaths, Marriages and Divorces

Year	Number				Rate per 1 000 of mean population			Deaths under one year of age	
	Births	Deaths	Marriages	Divorces	Births	Deaths	Marriages	Number	Rate per 1 000 live births
1820.....	no.	no.	no.	no.	n.a.	n.a.	n.a.	n.a.	n.a.
1830.....	460	270	163	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
1840.....	404	501	457	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
1845.....	1 506	697	658	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
1850.....	2 025	1 070	923	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
1855.....	2 948	1 692	1 257	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
1860.....	3 238	1 749	689	n.a.	36.48	19.71	7.76	n.a.	n.a.
1865.....	3 069	1 263	591	n.a.	32.96	13.56	6.35	n.a.	n.a.
1870.....	3 054	1 404	670	n.a.	30.53	14.03	6.70	298	97.6
1875.....	3 105	2 079	689	n.a.	29.86	19.99	6.83	407	131.1
1880.....	3 739	1 832	840	n.a.	32.90	16.12	7.39	420	112.3
1885.....	4 637	2 036	1 054	n.a.	36.29	15.94	8.25	522	112.6
1890.....	4 813	2 118	954	n.a.	33.60	14.79	6.66	508	105.6
1895.....	4 790	1 811	846	5	31.16	11.78	5.50	391	81.6
1900.....	4 864	1 903	1 332	4	28.18	11.02	7.72	389	80.0
1905.....	5 257	1 844	1 365	2	28.50	10.00	7.40	424	80.7
1910.....	5 586	2 120	1 493	6	29.25	11.10	7.82	568	101.7
1915.....	5 845	2 015	1 600	7	29.79	10.27	8.15	423	72.4
1920.....	5 740	2 036	1 999	18	27.29	9.68	9.50	376	65.5
1925.....	5 218	1 996	1 504	37	24.21	9.26	6.98	288	55.2
1930.....	4 786	1 948	1 450	42	21.66	8.82	6.56	242	50.6
1931.....	4 762	2 057	1 501	47	21.18	9.15	6.68	219	45.9
1932.....	4 491	2 022	1 508	33	19.78	8.90	6.64	185	41.2
1933.....	4 553	2 192	1 629	42	19.93	9.60	7.13	187	41.1
1934.....	4 470	2 345	1 678	60	19.50	10.23	7.32	189	42.3
1935.....	4 456	2 353	1 875	87	19.39	10.24	8.16	231	51.8
1936.....	4 581	2 387	2 073	62	19.79	10.31	8.96	227	49.6
1937.....	4 841	2 225	2 042	30	20.65	9.49	8.71	202	41.7
1938.....	4 907	2 288	2 082	109	20.76	9.68	8.81	195	39.7
1939.....	5 004	2 426	2 264	80	20.95	10.16	9.48	203	40.6
1940.....	4 994	2 387	2 476	83	20.71	9.90	10.27	176	35.2
1941.....	5 206	2 575	2 150	84	21.66	10.71	8.94	255	49.0
1942.....	5 305	2 430	2 431	83	22.00	10.08	10.08	255	42.4
1943.....	5 597	2 527	2 102	89	23.05	10.41	8.66	227	40.6
1944.....	5 200	2 494	1 935	115	21.17	10.15	7.88	199	38.3
1945.....	5 785	2 413	1 868	172	23.27	9.71	7.51	159	27.5
1946.....	6 847	2 549	2 650	219	27.15	10.11	10.51	207	30.2
1947.....	7 140	2 363	2 584	210	27.71	9.17	10.03	195	27.3
1948.....	6 979	2 528	2 428	185	26.49	9.60	9.22	193	27.7
1949.....	7 110	2 389	2 422	266	26.30	8.84	8.96	170	23.9
1950.....	7 242	2 466	2 560	152	25.96	8.85	9.18	172	23.8
1951.....	7 357	2 567	2 607	194	25.52	8.93	9.04	196	26.6
1952.....	7 916	2 579	2 553	217	26.53	8.64	8.56	172	21.7
1953.....	7 736	2 551	2 424	210	25.25	8.33	7.91	177	22.9
1954.....	7 770	2 696	2 512	238	24.98	8.67	8.08	186	23.9
1955.....	8 089	2 489	2 600	233	25.63	7.89	8.24	189	23.4
1956.....	8 104	2 513	2 601	197	25.24	7.83	8.10	170	21.0
1957.....	8 435	2 670	2 507	180	25.68	8.13	7.63	170	20.2
1958.....	8 568	2 708	2 475	176	25.55	8.07	7.38	167	19.5
1959.....	8 625	2 780	2 567	222	25.26	8.14	7.52	202	23.4
1960.....	8 853	2 670	2 713	210	25.52	7.70	7.82	169	19.1
1961.....	8 892	2 789	2 677	286	25.40	7.89	7.57	151	16.8
1962.....	8 894	2 870	2 485	249	25.01	8.07	6.99	184	20.7
1963.....	8 530	2 818	2 579	261	23.66	7.82	7.15	153	17.9
1964.....	8 252	3 174	2 869	230	22.64	8.71	7.87	166	20.1
1965.....	7 535	3 043	2 888	280	20.48	8.27	7.85	125	16.6
1966.....	7 401	3 159	2 946	319	19.92	8.50	7.93	108	14.6
1967.....	7 547	3 228	3 213	248	20.10	8.60	8.56	130	17.2
1968.....	8 317	3 284	3 426	303	21.89	8.64	9.02	143	17.2
1969.....	8 445	3 309	3 532	331	21.93	8.59	9.17	139	16.5
1970.....	8 185	3 174	3 535	426	21.09	8.16	9.11	116	14.2
1971.....	8 321	3 295	3 578	432	21.32	8.44	9.17	114	13.7
1972.....	7 824	3 227	3 426	446	19.94	8.22	8.73	127	16.2
1973.....	7 326	3 347	3 395	444	18.51	8.46	8.58	137	18.7
1974.....	7 398	3 484	3 567	536	18.52	8.72	8.93	123	16.6
1975.....	6 982	3 339	3 242	591	17.26	8.26	8.02	128	18.3
1976.....	6 702	3 389	3 477	1 760	16.44	8.32	8.53	77	11.5
1977.....	6 735	3 269	3 166	1 097	16.40	7.96	7.71	99	14.7

(Chapter 7)

Land Settlement: Land Utilisation
(^{'000 ha})

Land settlement (a)					Land utilisation on rural establishments				
Year (b)	Land		Crown land		Year	Area under		Balance of area	Total area of rural estab.
	Alienated	In process of alienation	Leased or licensed	Other		Crops (c)	Sown grasses (c)		
1860	1 242				1860-61	62			
1870	1 540				1870-71	64			
1880	1 713				1880-81	57			
1890	1 900		293	4 640	1890-91	64	81		
1900	1 957		513	4 364	1900-01	91	124	1 782	1 996
1910	1 996	447	591	3 799	1910-11	116	200	1 862	2 178
1920	2 121	390	920	3 402	1920-21	120	267	2 216	2 603
1921	1 228	372	980	3 352	1921-22	119	316	2 157	2 592
1922	2 156	356	994	3 327	1922-23	121	347	2 122	2 590
1923	2 189	323	979	3 342	1923-24	113	324	2 167	2 604
1924	2 222	295	971	3 345	1924-25	107	351	2 157	2 614
1925	2 208	283	977	3 327	1925-26	108	332	2 170	2 610
1926	2 264	261	1 158	3 150	1926-27	117	320	2 198	2 636
1927	2 279	249	1 542	2 763	1927-28	120	317	2 257	2 694
1928	2 292	238	1 768	2 535	1928-29	111	310	2 264	2 684
1929	2 306	227	1 140	3 160	1929-30	107	297	2 245	2 650
1930	2 315	219	1 122	3 177	1930-31	108	305	2 241	2 654
1931	2 323	209	1 075	3 227	1931-32	100	262	2 265	2 627
1932	2 331	203	1 057	3 243	1932-33	113	262	2 294	2 669
1933	2 337	197	1 061	3 238	1933-34	117	272	2 313	2 701
1934	2 349	189	1 094	3 201	1934-35	118	291	2 348	2 757
1935	2 358	180	1 104	3 191	1935-36	98	292	2 414	2 805
1936	2 366	179	1 074	3 215	1936-37	107	304	2 362	2 773
1937	2 372	177	1 115	3 170	1937-38	103	309	2 322	2 734
1938	2 379	175	1 090	3 189	1938-39	98	308	2 336	2 743
1939	2 385	175	1 053	3 196	1939-40	104	311	2 328	2 743
1940	2 392	171	1 098	3 172	1940-41	103	313	2 282	2 698
1941	2 400	169	1 129	3 135	1941-42	114	318	2 316	2 748
1942	2 411	163	1 113	3 146	1942-43	121	n.a.	n.a.	2 641
1943	2 418	162	1 140	3 113	1943-44	136	164	n.a.	2 587
1944	2 427	168	1 134	3 104	1944-45	139	165	n.a.	2 635
1945	2 439	165	1 123	3 107	1945-46	132	234	n.a.	2 622
1946	2 448	161	1 110	3 115	1946-47	123	230	n.a.	2 590
1947	2 460	157	1 100	3 116	1947-48	112	223	n.a.	2 502
1948	2 473	153	1 087	3 121	1948-49	112	268	n.a.	2 478
1950	2 486	148	1 134	3 065	1949-50	118	308	2 169	2 594
1951	2 496	145	1 080	3 112	1950-51	122	322	2 176	2 621
1952	2 514	142	1 108	3 069	1951-52	124	237	2 155	2 605
1953	2 525	139	1 111	3 058	1952-53	130	326	2 198	2 654
1954	2 534	137	1 055	3 107	1953-54	142	336	2 156	2 635
1955	2 516	134	1 018	3 136	1954-55	132	363	2 177	2 672
1956	2 554	126	1 010	3 143	1955-56	137	400	2 145	2 682
1957	2 561	127	655	3 490	1956-57	122	424	2 088	2 634
1958	2 568	84	623	3 558	1957-58	122	458	2 070	2 649
1959	2 575	81	615	3 562	1958-59	144	461	2 055	2 660
1960	2 584	77	618	3 554	1959-60	135	491	2 009	2 635
1961	2 591	86	626	3 531	1960-61	153	487	1 995	2 635
1962	2 597	80	606	3 551	1961-62	155	508	1 988	2 651
1963	2 602	80	586	3 565	1962-63	165	515	1 919	2 599
1964	2 670	89	628	3 446	1963-64	158	552	1 871	2 581
1965	2 679	83	595	3 476	1964-65	167	576	1 855	2 598
1966	2 677	84	540	3 531	1965-66	158	622	1 849	2 629
1967	2 692	100	535	3 506	1966-67	181	628	1 825	2 633
1968	2 692	93	478	3 571	1967-68	170	680	1 813	2 663
1969	2 693	96	465	3 579	1968-69	193	618	1 776	2 667
1970	2 697	100	442	3 594	1969-70	169	737	1 732	2 637
1971	2 702	99	381	3 651	1970-71	172	747	1 712	2 631
1972	2 697	100	274	3 760	1971-72	147	772	1 688	2 607
1973	2 729	133	248	3 723	1972-73	80	856	1 656	2 592
1974	2 731	135	236	3 728	1973-74 (e)	74	920	1 567	2 561
1975	2 755	159	223	3 693	1974-75	67	921	1 504	2 492
1976	2 751	154	229	3 696	1975-76 (e)	60	935	1 464	2 459
1977	2 743	146	116	3 775	1976-77 (e)	65	904	1 340	2 308

(a) Area of State, 68 300 square kilometres. (b) At 31 December until 1948; at 30 June for 1950 and subsequent years.

(c) Area of sown grasses cut for hay, seed and green fodder is included under 'crops'. (d) Not available on a comparable basis. (e) Not strictly comparable with earlier years due to changes in definition of a 'rural establishment'.

(Chapter 7)

Area and Production of Principal Crops

Year	Barley for grain			Oats for grain			Wheat for grain			Blue peas		
	Area	Total production	Yield per hectare	Area	Total production	Yield per hectare	Area	Total production	Yield per hectare	Area	Total production	Yield per hectare
	ha	tonnes	tonnes	ha	tonnes	tonnes	ha	tonnes	tonnes	ha	tonnes	tonnes
1860-61	2 524	2 877	1.14	12 263	16 844	1.37	26 891	38 267	1.42	n.a.	n.a.	n.a.
1870-71	3 082	3 676	1.19	12 523	12 568	1.00	23 222	24 240	1.04			
1880-81	3 358	3 844	1.14	8 034	7 990	0.99	20 243	20 271	1.00			
1890-91	1 771	2 269	1.28	8 393	9 444	1.13	13 133	17 378	1.32			
1900-01	1 822	2 657	1.46	18 240	25 580	1.40	20 973	30 011	1.43			
1910-11	2 119	3 234	1.53	25 854	37 515	1.45	21 142	30 290	1.43			
1911-12	2 461	3 364	1.37	23 303	27 357	1.17	15 058	17 827	1.18			
1912-13	3 562	6 043	1.70	25 271	41 041	1.62	10 209	17 036	1.67			
1913-14	3 125	4 261	1.36	23 830	28 976	1.22	7 459	9 452	1.27			
1914-15	2 362	2 382	1.01	23 093	24 397	1.06	9 658	10 384	1.08	1 921	2 019	1.05
1915-16	2 189	2 625	1.20	31 651	39 809	1.26	19 685	26 859	1.36	1 474	1 684	1.14
1916-17	1 877	2 016	1.07	22 269	18 294	0.82	11 246	9 414	0.84	2 267	3 234	1.43
1917-18	2 098	2 228	1.06	14 071	10 713	0.76	8 827	6 821	0.77	4 518	5 584	1.24
1918-19	2 847	3 208	1.13	14 662	15 426	1.05	4 823	5 042	1.05	8 408	9 541	1.13
1919-20	2 547	2 739	1.08	19 500	22 587	1.16	4 653	5 773	1.24	5 060	4 589	0.91
1920-21	2 489	3 667	1.47	20 426	27 530	1.35	11 446	15 294	1.34	3 476	4 945	1.42
1921-22	2 930	3 794	1.29	22 113	28 066	1.27	11 325	15 599	1.38	4 182	5 212	1.25
1922-23	2 309	3 455	1.50	23 801	30 450	1.28	10 216	15 394	1.51	3 532	4 377	1.24
1923-24	1 712	2 151	1.26	20 825	24 723	1.19	5 869	8 260	1.41	2 927	4 346	1.48
1924-25	1 218	1 153	0.95	18 686	19 381	1.04	5 242	6 254	1.19	3 112	3 362	1.08
1925-26	2 114	2 059	0.97	14 869	15 191	1.02	7 726	10 692	1.38	3 324	2 891	0.87
1926-27	2 293	3 405	1.48	19 571	24 673	1.26	9 386	14 513	1.55	3 043	4 055	1.33
1927-28	2 064	3 214	1.56	17 381	25 452	1.46	8 531	20 896	2.45	3 672	5 631	1.53
1928-29	1 867	2 252	1.21	15 217	18 389	1.21	9 134	12 306	1.35	3 960	4 624	1.17
1929-30	2 806	3 795	1.35	15 807	21 365	1.35	6 801	10 158	1.49	4 097	6 031	1.47
1930-31	2 506	3 832	1.53	14 536	19 141	1.32	7 732	10 581	1.37	2 859	4 060	1.42
1931-32	3 390	2 721	0.80	7 451	6 488	0.87	4 744	4 944	1.04	2 439	2 079	0.85
1932-33	3 478	4 808	1.38	12 404	15 059	1.21	8 492	11 704	1.38	3 687	5 688	1.54
1933-34	3 173	3 915	1.23	12 626	15 532	1.23	9 752	15 153	1.55	5 663	6 592	1.16
1934-35	2 339	3 989	1.71	14 816	19 168	1.29	6 740	8 311	1.23	5 283	4 722	0.89
1935-36	2 115	2 107	1.00	9 683	10 123	1.05	4 210	5 027	1.19	4 116	3 430	0.83
1936-37	2 811	5 470	1.95	8 884	13 659	1.54	8 627	15 430	1.79	2 613	3 912	1.50
1937-38	3 762	6 958	1.85	13 128	18 767	1.43	8 531	14 216	1.67	1 882	2 707	1.44
1938-39	3 518	4 731	1.34	10 049	11 727	1.17	3 986	5 548	1.39	1 787	2 050	1.15
1939-40	3 125	4 446	1.42	9 352	9 626	1.03	3 033	2 911	0.96	2 113	3 407	1.61
1940-41	2 286	3 349	1.47	7 099	7 569	1.07	3 253	3 794	1.17	3 830	5 237	1.37
1941-42	2 153	2 672	1.24	11 043	15 248	1.38	2 596	3 924	1.51	7 485	8 452	1.13
1942-43	1 104	1 428	1.29	5 325	5 310	1.00	1 671	1 982	1.19	10 989	10 961	1.00
1943-44	1 391	2 150	1.55	3 943	5 438	1.38	1 958	3 301	1.69	15 176	15 785	1.04
1944-45	2 189	3 616	1.65	5 977	7 630	1.28	1 551	2 504	1.61	8 828	13 014	1.47
1945-46	2 730	2 803	1.03	5 656	5 120	0.91	2 016	1 801	0.89	9 420	7 922	0.84
1946-47	2 532	3 538	1.40	9 181	10 825	1.18	3 051	3 763	1.23	4 773	6 364	1.33
1947-48	3 298	4 961	1.50	6 910	6 548	0.95	3 147	3 195	1.02	2 783	3 938	1.42
1948-49	2 966	4 728	1.59	4 734	4 756	1.00	2 779	4 211	1.52	2 625	3 999	1.52
1949-50	1 759	2 975	1.69	9 232	10 499	1.14	2 215	3 440	1.55	3 101	3 955	1.28
1950-51	1 320	2 061	1.56	9 486	7 802	0.82	2 152	2 564	1.19	3 395	4 630	1.36
1951-52	1 716	3 400	1.98	10 740	10 803	1.01	1 458	2 541	1.74	3 078	5 338	1.73
1952-53	3 253	4 930	1.52	8 114	5 197	0.64	2 707	4 227	1.56	1 411	1 903	1.35
1953-54	3 819	6 738	1.76	8 141	8 381	1.03	3 921	7 116	1.81	2 159	3 096	1.43
1954-55	2 936	4 541	1.55	9 154	8 212	0.90	2 955	4 286	1.45	2 292	3 093	1.35
1955-56	2 558	4 339	1.70	11 604	9 964	0.86	2 519	3 478	1.38	2 334	3 690	1.58
1956-57	2 865	5 341	1.86	6 701	4 594	0.69	1 578	2 393	1.52	3 349	5 088	1.52
1957-58	3 393	6 140	1.81	8 381	8 762	1.05	2 381	4 148	1.74	2 923	3 854	1.32
1958-59	3 777	6 696	1.77	8 984	8 921	0.99	2 605	4 423	1.70	1 002	1 302	1.30
1959-60	5 016	9 511	1.90	8 910	9 305	1.04	3 344	4 912	1.47	1 285	2 148	1.67
1960-61	6 204	7 821	1.26	9 448	7 114	0.75	2 797	4 003	1.43	1 332	1 198	0.90
1961-62	7 579	13 794	1.82	10 909	10 676	0.98	6 300	9 327	1.48	1 566	2 814	1.80
1962-63	7 993	14 340	1.79	12 587	15 046	1.20	6 208	11 322	1.82	2 299	3 409	1.48
1963-64	5 581	9 414	1.69	12 280	15 339	1.25	7 107	13 047	1.84	2 087	2 693	1.29
1964-65	6 264	12 031	1.92	11 366	9 463	0.83	6 801	9 842	1.45	1 603	2 552	1.72
1965-66	8 056	15 541	1.93	11 449	12 304	1.07	5 709	9 955	1.74	2 223	2 779	1.25
1966-67	8 521	17 540	2.06	14 532	17 236	1.19	5 159	10 412	2.02	1 769	3 039	1.72
1967-68	9 733	20 096	2.06	14 314	18 430	1.29	4 864	8 548	1.76	1 725	2 540	1.47
1968-69	10 608	20 092	1.89	12 721	10 598	0.83	7 039	11 088	1.58	1 358	2 160	1.59
1969-70	12 016	24 896	2.07	8 971	8 272	0.92	5 962	9 531	1.60	1 577	3 224	2.04
1970-71	12 884	29 825	2.31	9 444	8 839	0.94	4 479	7 638	1.71	2 023	4 608	2.28
1971-72	12 576	27 753	2.21	6 432	7 065	1.10	4 570	8 299	1.82	1 025	1 650	1.61
1972-73	12 802	18 711	1.46	6 477	7 144	1.10	4 251	7 701	1.81	504	387	0.77
1973-74 (a)	11 121	23 790	2.13	9 773	8 227	0.89	2 521	3 510	1.39	587	1 027	1.74
1974-75	12 020	27 266	2.27	6 069	5 496	0.90	1 535	2 282	1.48	969	2 171	2.24
1975-76 (a)	11 475	18 389	1.60	3 923	3 497	0.89	1 644	1 728	1.05	209	261	1.25
1976-77 (a)	11 644	24 571	2.11	6 387	8 801	1.38	1 980	3 929	1.98	81	139	1.72

(a) Area and production details are not strictly comparable with data for earlier years due to changes in the definition of a 'rural establishment'.

(Chapter 7)

Area and Production of Principal Crops—continued

Year	Potatoes			Hops			Hay			Apples		
	Area	Total production	Yield per hectare	Bearing area	Total production	Yield per hectare	Area	Total production	Yield per hectare	Bearing area	Total production	Yield per hectare
	ha	tonnes	tonnes	ha	tonnes	tonnes	ha	tonnes	tonnes	ha	tonnes	tonnes
1860-61	3 084	34 128	11.07	n.a.	n.a.	n.a.	12 880	63 318	4.92		2 267	
1870-71	3 975	36 606	9.21	260	339	1.30	13 602	41 417	3.04		2 819	
1880-81	4 217	33 070	7.84	230	292	1.27	12 794	36 459	2.85		2 953	
1890-91	8 147	74 332	9.12	151	196	1.30	18 365	52 856	2.88		7 030	
1900-01	9 335	95 368	10.22	253	316	1.25	24 868	95 710	3.85	n.a.	10 497	n.a.
1910-11	10 615	71 215	6.71	420	805	1.92	29 539	117 039	3.96		25 681	
1911-12	8 829	63 162	7.15	416	480	1.15	31 349	109 412	3.49		28 691	
1912-13	9 960	73 730	7.40	505	871	1.72	40 403	186 658	4.62		25 357	
1913-14	12 469	81 679	6.55	548	705	1.29	34 049	114 771	3.37	6 860	36 692	5.35
1914-15	12 793	80 173	6.27	540	768	1.42	36 259	83 287	2.30	7 164	28 996	4.05
1920-21	12 950	90 102	6.96	516	845	1.64	45 980	179 636	3.91	10 364	44 941	4.34
1921-22	14 890	109 351	7.34	572	995	1.74	37 006	139 190	3.76	10 829	56 982	5.26
1922-23	13 924	102 825	7.38	599	986	1.65	40 504	169 967	4.20	10 372	59 592	5.75
1923-24	14 989	101 540	6.77	604	1 040	1.72	39 329	146 614	3.73	10 393	36 006	3.46
1924-25	14 638	84 715	5.88	605	1 009	1.67	35 590	123 054	3.46	10 383	42 103	4.05
1925-26	13 431	68 422	5.09	483	791	1.64	37 472	116 764	3.12	10 311	78 719	7.63
1926-27	13 753	115 931	8.43	528	974	1.84	39 776	153 627	3.86	10 120	55 248	5.46
1927-28	17 951	141 065	7.86	514	1 119	2.18	34 710	126 929	3.66	10 237	89 025	8.70
1928-29	15 094	76 429	5.06	480	875	1.82	32 452	121 344	3.74	10 219	47 628	4.66
1929-30	13 647	92 600	6.79	472	872	1.85	32 437	121 723	3.75	9 562	75 251	7.87
1930-31	15 066	96 818	6.43	393	760	1.93	33 697	131 027	3.89	9 672	72 394	7.48
1931-32	14 727	96 920	6.58	345	725	2.10	34 118	94 081	2.76	9 377	111 334	11.87
1932-33	14 475	99 809	6.90	321	628	1.96	37 501	143 403	4.20	9 402	84 015	8.94
1933-34	14 778	82 578	5.59	328	730	2.22	31 414	111 153	3.54	9 436	94 360	10.00
1934-35	14 714	71 142	4.83	334	831	2.49	38 857	152 492	3.92	9 485	74 947	7.90
1935-36	14 050	87 183	6.21	352	981	2.79	30 247	98 443	2.53	9 296	75 251	8.09
1936-37	14 960	140 781	9.41	365	950	2.60	36 177	139 068	3.84	8 745	87 844	10.05
1937-38	13 139	101 574	7.73	357	958	2.68	29 561	114 809	3.88	8 881	91 292	10.28
1938-39	10 803	90 764	8.40	373	1 041	2.79	32 358	111 291	3.44	8 684	109 048	12.56
1939-40	12 323	116 245	9.43	368	808	2.20	38 957	143 674	3.69	8 850	98 075	11.08
1940-41	15 121	115 871	7.66	369	1 351	3.66	30 789	96 708	3.14	8 808	113 277	12.86
1941-42	12 400	111 613	9.00	427	1 280	3.00	37 488	149 997	4.00	8 970	121 107	13.50
1942-43	16 359	138 112	8.44	448	1 183	2.64	33 209	111 721	3.36	8 899	109 410	12.31
1943-44	24 484	221 296	9.04	435	1 267	2.91	40 178	156 303	3.89	8 896	152 846	17.18
1944-45	32 817	350 773	4.55	441	1 102	2.50	38 855	148 253	3.82	8 723	125 165	14.35
1945-46	22 762	239 930	10.54	445	904	2.03	40 371	118 958	2.95	8 702	162 353	18.66
1946-47	17 493	173 359	9.91	490	1 005	2.05	42 093	172 103	4.09	8 544	80 548	9.43
1947-48	16 342	145 037	8.88	506	1 113	2.20	34 137	139 857	4.10	8 239	150 389	18.25
1948-49	13 079	133 915	10.24	508	694	1.37	36 656	153 118	4.18	7 826	48 828	6.24
1949-50	13 804	123 958	8.98	518	977	1.89	36 962	158 151	4.28	7 661	91 330	11.92
1950-51	12 780	125 990	9.86	518	1 125	2.17	39 007	163 301	4.19	7 378	92 359	12.52
1951-52	12 753	153 424	12.03	531	778	1.47	39 563	175 051	4.42	7 273	93 921	12.91
1952-53	14 304	116 338	8.13	524	1 367	2.61	44 534	195 289	4.39	7 200	71 575	9.94
1953-54	13 971	146 616	10.49	518	973	1.88	49 877	245 459	4.92	7 184	101 047	14.07
1954-55	10 606	102 621	9.68	539	1 353	2.51	39 051	160 495	4.11	6 890	95 426	13.85
1955-56	8 434	79 181	9.39	531	1 437	2.71	55 505	265 619	4.79	6 950	112 896	16.24
1956-57	7 740	91 140	11.78	569	974	1.71	49 837	242 209	4.86	6 754	64 792	9.59
1957-58	8 780	103 129	11.75	571	1 302	2.28	44 581	208 062	4.67	6 804	126 403	18.58
1958-59	6 550	87 279	13.32	579	1 535	2.65	62 250	306 923	4.93	6 651	94 931	14.27
1959-60	6 283	99 573	15.85	581	1 270	2.19	51 211	224 778	4.39	6 509	104 266	16.02
1960-61	4 401	39 677	9.02	569	1 279	2.25	69 206	331 206	4.79	6 404	106 571	16.64
1961-62	4 504	72 709	16.14	571	1 287	2.25	63 632	289 971	4.56	6 239	149 436	23.95
1962-63	5 600	83 870	14.98	588	1 298	2.21	66 952	318 028	4.75	6 268	119 297	19.03
1963-64	4 373	66 470	15.20	592	717	1.21	60 557	253 175	4.18	6 291	162 791	25.88
1964-65	3 801	57 978	15.25	597	947	1.59	72 947	370 204	5.07	6 286	118 250	18.81
1965-66	4 853	77 626	16.00	603	1 392	2.31	59 824	261 366	4.37	6 254	159 343	25.48
1966-67	4 159	74 476	17.91	594	948	1.60	82 225	443 919	5.40	6 165	120 040	19.47
1967-68	4 435	80 327	18.11	608	1 363	2.24	72 373	314 060	4.34	6 048	151 322	25.02
1968-69	4 638	73 278	15.80	616	1 582	2.57	85 212	502 159	5.89	5 863	135 986	23.19
1969-70	3 790	67 995	17.94	565	1 268	2.24	69 526	367 340	5.28	5 804	140 977	24.29
1970-71	3 640	72 591	19.94	452	1 077	2.38	85 656	447 766	5.23	5 715	140 463	24.58
1971-72	3 593	70 370	19.59	539	1 159	2.15	81 176	449 936	5.54	5 218	111 887	21.44
1972-73	3 330	78 286	23.51	616	1 450	2.35	53 937	215 580	4.00	4 980	133 449	26.80
1973-74 (a)	3 127	62 866	20.10	703	1 949	2.77	88 884	448 355	5.04	4 748	113 012	27.24
1974-75	4 143	95 610	23.07	662	1 439	2.17	78 557	375 969	4.79	3 335	95 247	28.56
1975-76 (a)	3 354	95 614	28.51	573	1 129	2.20	70 262	322 235	4.59	2 947	72 529	24.61
1976-77 (a)	3 705	112 269	30.30	587	1 330	2.27	69 730	334 961	4.80	2 741	71 781	26.19

(a) Area and production details are not strictly comparable with data for earlier years due to changes in the definition of a 'rural establishment'.

(Chapter 7)

Livestock Numbers; Production of Wool; Lambing

Year	Livestock (a)				Production of Wool (b)			Lambing	
	Horses	Cattle	Sheep	Pigs	Number of sheep and lambs shorn	Average yield per sheep and lamb shorn (including crutchings)	Production of wool (including dead, fell-mongered & exported on skins)	Ewes mated	Lambs marked
	no.	no.	'000	no.	'000	kg	'000 kg	'000	'000
1860	21 034	83 366	1 701	31 290			2 058		
1870	22 679	101 459	1 350	49 432			1 881		
1880	25 267	127 187	1 794	48 029			4 094		
1890	31 165	162 440	1 619	81 716			4 075		
1900	31 607	165 516	1 684	68 291			3 064	n.a.	n.a.
1910	41 388	201 854	1 788	63 715	n.a.	n.a.	6 050		
1911	41 853	217 406	1 823	67 392			5 773		
1912	44 039	222 181	1 863	49 152			6 539		
1913	43 941	205 743	1 745	37 990			5 485		
1914-15	42 232	176 524	1 675	34 960	1 572	n.a.	5 465	596	399
								560	369
1920-21	39 117	208 202	1 571	38 116	1 551	2.94	5 218	416	299
1921-22	38 439	216 704	1 551	49 743	1 428	3.25	5 278	506	378
1922-23	37 313	218 197	1 558	46 056	1 503	3.26	5 542	524	411
1923-24	37 570	220 351	1 558	47 101	1 507	3.13	5 312	517	392
1924-25	37 091	225 740	1 614	47 305	1 630	3.16	5 662	557	423
1925-26	37 785	212 373	1 619	41 009	1 639	3.18	5 699	554	390
1926-27	36 830	213 112	1 908	38 906	1 738	2.93	5 594	563	433
1927-28	35 872	210 894	1 905	41 752	1 859	2.99	6 021	629	488
1928-29	34 908	208 812	2 001	48 304	1 902	3.22	6 759	640	502
1929-30	34 336	214 643	2 091	52 899	1 983	3.14	6 804	679	534
1930-31	32 700	230 254	2 120	54 556	1 961	3.11	6 713	695	547
1931-32	30 659	232 444	2 012	41 459	1 913	3.14	6 668	647	478
1932-33	30 269	250 807	2 041	41 391	1 940	3.16	6 895	679	526
1933-34	30 299	262 256	2 035	38 126	1 991	2.91	6 441	686	517
1934-35	30 662	261 588	2 038	40 291	1 976	2.90	6 366	672	497
1935-36	30 626	270 035	2 140	45 163	2 010	3.37	7 394	735	586
1936-37	30 971	261 597	2 234	40 021	1 106	2.72	6 381	791	594
1937-38	31 578	254 812	2 321	43 067	2 460	2.60	7 076	873	722
1938-39	30 458	262 407	2 626	45 317	2 432	3.03	7 946	940	737
1939-40	29 605	252 484	2 677	44 941	2 509	3.08	8 316	940	756
1940-41	29 406	259 108	2 682	46 713	2 517	2.78	7 746	988	764
1941-42	28 612	253 106	2 398	44 519	2 416	3.04	7 704	844	669
1942-43	27 077	244 681	2 227	49 251	2 293	2.98	7 827	785	655
1943-44	26 317	230 127	2 188	46 427	2 260	2.93	8 130	811	669
1944-45	25 885	224 668	2 156	46 915	2 235	2.79	7 404	756	629
1945-46	24 863	216 306	1 926	46 915	2 015	2.73	7 411	701	509
1946-47	23 925	220 119	1 933	47 407	2 005	3.04	7 549	577	440
1947-48	23 125	244 107	2 087	45 149	2 085	3.18	6 952	779	656
1948-49	22 207	266 419	2 160	36 996	2 198	3.09	7 641	803	662
1949-50	21 197	274 740	2 170	35 841	2 255	2.97	7 692	800	652
1950-51	20 056	271 784	2 182	45 446	2 245	2.99	7 824	774	637
1951-52	18 834	266 263	2 338	46 926	2 379	3.42	9 305	839	726
1952-53	18 224	275 131	2 422	39 378	2 502	3.19	8 984	894	768
1953-54	17 076	295 178	2 465	46 256	2 553	3.16	9 124	916	788
1954-55	15 865	319 417	2 595	58 382	2 715	3.53	10 794	968	884
1955-56	14 640	331 589	2 673	49 498	2 733	3.45	10 624	979	877
1956-57	13 781	354 170	2 943	52 358	3 082	3.78	13 009	1 150	1 056
1957-58	12 856	371 409	3 298	62 595	3 388	3.50	13 234	1 266	1 199
1958-59	11 712	374 324	3 536	69 215	3 673	3.57	14 803	1 381	1 269
1959-60	10 512	375 342	3 494	67 118	3 834	3.44	15 241	1 461	1 354
1960-61	9 380	394 208	3 439	70 882	3 678	3.44	14 456	1 378	1 267
1961-62	8 567	425 151	3 532	75 754	3 830	3.56	15 635	1 440	1 368
1962-63	8 193	443 603	3 570	70 002	3 783	3.64	15 677	1 419	1 310
1963-64	7 638	449 998	3 600	82 534	3 868	3.47	15 425	1 458	1 353
1964-65	7 322	451 471	3 792	92 021	3 978	4.06	17 994	1 478	1 374
1965-66	n.a.	491 917	4 127	96 156	4 318	3.88	18 986	1 651	1 594
1966-67	6 660	521 664	4 321	85 654	4 517	3.88	19 574	1 688	1 574
1967-68	n.a.	563 726	4 428	86 517	4 572	3.34	17 376	1 779	1 522
1968-69	n.a.	585 718	4 395	95 363	4 632	4.09	21 299	1 736	1 561
1969-70	n.a.	646 439	4 560	111 275	4 792	4.05	21 861	1 831	1 715
1970-71	n.a.	733 415	4 517	112 636	4 806	3.99	21 671	1 889	1 705
1971-72	n.a.	829 319	4 237	103 934	4 607	4.03	21 063	1 805	1 617
1972-73	n.a.	900 489	3 824	85 114	4 251	3.76	18 154	1 604	1 369
1973-74(c)	n.a.	884 201	3 964	68 379	4 101	3.90	17 549	1 535	1 361
1974-75	n.a.	920 835	4 136	63 973	4 153	4.12	18 888	1 644	1 466
1975-76(c)	n.a.	909 232	4 249	69 773	4 352	4.12	19 951	1 677	1 515
1976-77(c)	n.a.	818 831	4 015	64 586	4 229	4.13	18 109	1 640	1 378
1977-78p	n.a.	733 763	3 968	64 235	4 241	3.82	18 924	n.y.a.	n.y.a.

(a) Up to 1925-26 numbers recorded were at varying dates in the years shown; from 1926 to 1940 at 31 December; from 1941-42 at 31 March.

(b) All wool converted to equivalent greasy weight.

(c) Details not strictly compatible with data for earlier years due to changes in the definition of a 'rural establishment'.

(Chapter 7)

Livestock Slaughtered (a) for Human Consumption

Year	Cattle and Calves				Sheep and Lambs			Pigs
	Bulls, bullocks & steers	Cows and heifers	Calves	Total	Sheep	Lambs	Total	
1924-25	21 068	12 544	2 542	36 154	212 983	63 134	276 117	55 229
1929-30	20 430	13 034	1 814	35 278	228 090	113 437	341 527	64 287
1939-40	32 685	12 110	3 633	48 428	248 372	212 585	460 957	73 398
1944-45	27 290	14 536	4 701	46 527	323 797	185 616	509 413	58 068
1949-50	29 331	23 736	4 580	57 647	245 691	262 360	508 051	50 861
1950-51	32 199	28 921	8 637	69 757	234 084	250 535	484 619	57 787
1951-52	33 352	29 506	8 729	71 587	226 377	256 116	482 493	65 893
1952-53	32 913	25 270	12 297	70 480	269 776	306 739	576 515	65 520
1953-54	22 630	25 188	13 955	61 773	286 665	307 326	593 991	59 473
1954-55	26 741	32 871	15 333	74 945	287 103	356 103	643 206	79 305
1955-56	32 259	36 370	19 786	88 415	256 188	388 802	644 990	87 609
1956-57	38 494	38 341	25 195	102 030	280 082	403 859	683 941	82 032
1957-58	42 028	45 294	30 534	117 856	283 242	451 214	734 456	90 593
1958-59	42 525	49 046	35 923	127 494	362 988	546 196	909 184	107 489
1959-60	47 147	56 885	40 548	144 580	504 961	661 470	1 166 431	114 538
1960-61	35 515	43 309	36 170	114 994	474 690	601 042	1 075 732	111 457
1961-62	42 614	48 638	44 230	135 482	510 626	649 306	1 159 932	120 450
1962-63	49 510	62 317	46 149	157 976	465 996	628 757	1 094 753	115 424
1963-64	51 518	70 885	53 823	176 226	544 945	582 113	1 127 058	123 502
1964-65	52 946	70 510	50 610	174 066	424 810	562 135	986 945	134 526
1965-66	47 066	60 664	46 514	154 244	566 671	597 197	1 163 868	146 266
1966-67	52 475	67 206	50 789	170 470	552 235	606 859	1 159 094	148 913
1967-68	57 871	66 016	47 872	171 759	600 124	524 850	1 124 974	142 986
1968-69	68 376	64 160	45 236	177 772	567 501	673 446	1 240 947	138 954
1969-70	78 618	66 473	32 765	177 856	608 311	688 664	1 296 975	160 112
1970-71	78 926	61 139	22 011	162 076	713 204	680 679	1 393 883	170 579
1971-72	96 255	69 186	19 346	184 787	812 960	662 193	1 475 153	165 007
1972-73	124 672	110 177	25 933	260 782	636 501	641 718	1 278 219	152 004
1973-74	126 251	103 552	29 554	259 357	335 566	489 697	825 263	115 625
1974-75	149 285	75 382	37 450	262 117	402 813	577 119	979 932	101 359
1975-76	164 059	119 418	64 536	348 013	454 912	613 611	1 068 523	94 090
1976-77	144 910	139 910	72 888	357 708	469 125	523 522	992 647	99 603
1977-78	160 977	132 802	68 686	362 465	386 772	650 067	1 036 839	92 474

(a) Including livestock slaughtered on farms.

(Chapter 7)

Production of Meat
(Tonnes: Carcass Weight)

Year	Beef and veal			Mutton and lamb			Pigmeat (a)	Total all meat
	Beef	Veal	Total	Mutton	Lamb	Total		
1924-25	8 233		8 233	4 154	888	5 042	2 561	15 836
1929-30	8 153		8 153	4 448	1 595	6 043	2 848	17 044
1939-40	10 626	165	10 791	4 845	2 989	7 834	3 560	22 185
1944-45	9 117	212	9 329	6 400	2 948	9 348	3 104	21 781
1949-50	12 299	169	12 468	4 896	4 173	9 069	2 597	24 134
1950-51	14 027	303	14 330	4 890	3 910	8 800	2 835	25 965
1951-52	14 405	216	14 621	4 808	4 311	9 119	3 159	26 899
1952-53	13 751	313	14 064	5 745	5 082	10 827	3 176	28 067
1953-54	10 888	292	11 180	6 100	5 150	11 250	2 736	25 166
1954-55	13 537	353	13 890	6 147	5 945	12 092	3 484	29 466
1955-56	15 133	530	15 663	5 260	6 707	11 967	3 693	31 323
1956-57	17 592	612	18 204	5 812	6 998	12 810	3 402	34 416
1957-58	19 635	726	20 361	5 694	7 739	13 433	4 284	38 078
1958-59	19 893	839	20 732	7 444	9 223	16 667	4 990	42 389
1959-60	22 610	906	23 516	10 267	10 846	21 113	5 438	50 067
1960-61	16 388	777	17 165	9 513	9 715	19 228	5 138	41 531
1961-62	19 076	910	19 989	10 228	10 326	20 554	5 515	46 058
1962-63	23 076	999	24 075	9 614	10 083	19 697	5 549	49 321
1963-64	24 988	1 337	26 325	11 101	9 300	20 401	6 022	52 748
1964-65	25 741	951	26 692	9 225	9 189	18 414	6 691	51 797
1965-66	22 429	951	23 380	11 697	9 739	21 436	7 136	51 952
1966-67	24 124	967	25 091	11 412	9 825	21 237	7 279	53 607
1967-68	24 509	977	25 486	11 666	8 497	20 163	7 001	52 650
1968-69	27 583	802	28 385	11 701	11 112	22 813	7 137	58 335
1969-70	30 909	599	31 509	12 767	11 282	24 049	8 007	63 564
1970-71	29 481	398	29 879	14 755	11 318	26 073	8 530	64 482
1971-72	34 422	374	34 796	16 314	10 875	27 189	8 266	70 251
1972-73	46 946	525	47 471	12 201	10 327	22 528	7 389	77 388
1973-74	45 669	613	46 282	6 672	8 096	14 768	5 477	66 527
1974-75	47 592	721	48 313	7 984	9 508	17 492	4 872	70 677
1975-76	57 924	1 242	59 166	8 997	9 849	18 846	4 516	82 529
1976-77	55 790	1 613	57 403	8 494	8 189	16 683	4 946	79 032
1977-78	59 779	1 556	61 335	7 035	9 849	16 884	4 785	83 004

(a) Includes pork for manufacture into bacon and ham.

(Chapter 7)

Value of Agricultural Commodities Produced
(\$'000)

Year	Crops (a)		Livestock slaughtering and other disposals		Livestock products		Total agriculture	
	Gross	Local	Gross	Local	Gross	Local	Gross	Local
1970-71	40 169	29 174	28 142	25 910	41 903	40 194	110 214	95 277
1971-72	33 748	24 043	31 468	28 956	46 980	45 133	112 196	98 132
1972-73	40 041	28 261	43 562	40 363	64 750	61 652	148 353	130 276
1973-74	46 649	36 969	58 019	54 000	59 995	57 262	164 663	148 231
1974-75	49 409	39 670	31 707	29 083	58 588	54 127	139 704	122 879
1975-76	44 101	36 237	34 052	31 042	63 880	61 033	142 033	128 312
1976-77	57 816	50 712	45 156	41 430	75 729	71 838	178 701	163 980

(a) Excludes crops and pasture harvested for green feed or silage.

(Chapter 7)

Average Wholesale Price Per Unit of Selected Farm Products
(\$)

Year	Cereals for grain		Hops	Orchard fruit		Small fruit		Potatoes	Hay	Wool greasy
	Wheat	Barley		Apples	Pears	Currants	Raspberries			
	per tonne	per tonne	per tonne	per tonne	per tonne	per kg	per kg	per tonne	per tonne	per kg
1929-30	18.37	14.99	198.42	17.32	22.54	0.04	0.04	13.72	8.64	0.22
1934-35	12.12	13.23	308.65	27.82	28.42	0.04	0.04	17.93	5.89	0.20
1939-40	12.49	16.75	330.69	22.57	24.50	0.07	0.07	18.79	6.10	0.26
1944-45	17.64	23.37	396.83	19.95	19.60	0.09	0.07	25.40	11.28	0.35
1949-50	49.97	32.19	771.62	64.04	73.01	0.13	0.13	31.29	12.70	1.32
1954-55	49.97	73.63	1 212.54	101.31	114.17	0.18	0.18	81.89	22.05	1.41
1959-60	50.70	58.64	1 388.91	98.68	100.45	0.22	0.20	40.18	19.34	1.15
1960-61	51.44	63.49	1 366.86	101.83	126.42	0.26	0.18	91.81	18.75	1.06
1961-62	58.78	63.93	1 433.00	104.46	87.22	0.26	0.22	53.32	16.67	1.08
1962-63	54.38	61.29	1 433.00	112.33	122.01	0.24	0.22	25.58	14.39	1.21
1963-64	52.54	63.05	1 433.00	107.08	110.74	0.26	0.22	65.92	16.26	1.48
1964-65	48.86	61.29	1 499.14	113.38	129.36	0.22	0.22	119.86	12.97	1.08
1965-66	50.70	57.76	1 565.28	100.26	67.62	0.20	0.22	37.99	15.77	1.23
1966-67	52.54	63.49	1 653.47	124.40	118.58	0.24	0.24	55.44	16.61	1.12
1967-68	53.64	65.69	1 697.56	110.23	101.92	0.29	0.31	49.08	21.01	0.97
1968-69	41.88	56.88	1 697.56	106.55	124.46	0.29	0.33	29.85	16.13	1.06
1969-70	52.91	52.47	1 697.56	110.23	136.22	0.31	0.33	47.03	11.86	0.88
1970-71	48.13	51.14	1 697.56	103.41	134.26	0.33	0.35	42.86	13.52	0.75
1971-72	54.01	47.18	1 873.93	103.41	117.11	0.33	0.35	38.53	13.29	1.90
1972-73	52.20	52.53	1 961.40	120.87	173.95	0.35	0.35	57.23	24.38	2.29
1973-74	103.97	77.00	1 648.54	120.46	117.11	0.39	0.41	86.92	30.11	1.92
1974-75	103.51	91.78	1 860.22	148.65	180.70	0.47	0.53	59.43	63.95	1.37
1975-76	97.31	98.83	1 395.00	172.99	171.42	0.50	0.50	78.76	29.17	1.57
1976-77	82.00	111.07	1 694.57	164.64	195.11	0.55	0.58	83.33	49.81	2.10

(Chapter 8)

Assayed Contents of Metallic Minerals Produced: Coal Production

Year	Cadmium	Copper	Gold	Iron	Lead	Manganese
	tonnes	tonnes	grams	tonnes	tonnes	tonnes
1953	73	9 045	528 386	—	10 199	—
1955	50	8 529	525 089	—	11 448	—
1960	57	11 867	747 199	—	13 249	175
1961	63	12 947	836 217	—	12 450	188
1962	73	14 748	998 982	—	14 991	268
1963	75	17 075	1 132 851	—	15 222	262
1964	78	15 118	1 069 214	—	15 594	247
1965	71	15 411	1 023 211	—	14 466	237
1966	76	17 278	1 135 495	—	15 828	258
1967	74	17 540	1 166 972	—	15 375	247
1968	75	16 867	1 135 215	502 462	15 152	250
1969	77	18 983	1 251 760	1 388 328	15 145	258
1970	70	23 934	1 334 931	1 346 065	13 934	209
1971	84	25 525	1 792 681	1 497 486	16 617	509
1972	138	28 298	2 020 794	1 623 450	26 806	2 205
1973	178	25 821	1 511 371	1 678 146	20 236	2 399
1974	126	29 086	1 586 341	1 514 373	19 017	385
1975	167	26 460	1 667 548	1 431 041	19 552	265
1976	157	25 342	1 494 669	1 542 306	18 034	232
1977	199	22 002	1 891 442	1 413 476	22 800	427

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Assayed Contents of Metallic Minerals Produced: Coal Production—continued

Year	Silver	Sulphur	Tin	Tungstic oxide (WO ₃)	Zinc	Coal production
	grams	tonnes	tonnes	tonnes	tonnes	tonnes
1953.....	38 599 443	42 516	801	1 069	30 247	237 370
1955.....	36 266 681	38 857	867	1 358	28 396	304 023
1960.....	43 482 693	55 636	898	1 115	35 069	302 448
1961.....	45 162 282	53 128	893	1 543	40 735	259 934
1962.....	52 875 950	37 145	1 075	1 052	48 687	276 713
1963.....	52 969 260	42 997	1 021	975	49 267	210 243
1964.....	55 364 230	57 004	1 006	1 009	50 960	153 587
1965.....	52 191 673	54 840	1 043	1 196	47 053	104 101
1966.....	57 012 715	63 804	1 047	1 327	50 651	83 990
1967.....	55 955 196	62 470	1 553	1 202	49 641	77 769
1968.....	54 400 021	53 926	3 154	1 425	48 919	92 389
1969.....	54 213 400	47 449	4 853	1 524	50 898	117 794
1970.....	53 342 502	84 502	5 018	1 434	46 922	113 529
1971.....	63 388 933	109 046	6 166	1 742	52 749	123 922
1972.....	99 251 268	164 884	6 825	1 918	85 580	132 242
1973.....	76 903 306	160 971	5 674	1 502	63 792	114 588
1974.....	80 179 776	153 767	5 950	1 304	65 311	127 460
1975.....	76 401 435	152 884	5 489	1 712	67 476	161 922
1976.....	71 310 066	154 008	6 853	2 202	62 004	189 489
1977.....	84 771 543	163 486	6 634	2 534	78 405	198 966

(Chapter 8)

Sea Fisheries

Year	Boats engaged (a)	Persons engaged (a)	Production (b)							Gross value of production (c)
			Fish				Southern rock lobster	Scallops	Abalone	
			Snoek (barracouta)	Salmon	Shark	Other				
	no.	no.	'000 kg	'000 kg	'000 kg	'000 kg	'000 kg	'000 kg	'000 kg	\$'000
1951-52	n.a.	n.a.	1 580	50	392	319	852	738	—	882
1952-53			1 819	61	1 010	231	1 222	1 465	—	1 210
1953-54			362	173	506	238	1 006	1 714	—	864
1954-55			673	195	301	243	1 313	2 452	—	1 112
1955-56			576	116	291	170	1 108	2 625	—	1 012
1956-57			472	958	1 100	33	235	180	954	2 664
1957-58	458	907	414	60	384	128	1 088	1 888	—	1 016
1958-59	438	923	644	93	360	171	1 250	2 148	—	1 328
1959-60	469	968	711	147	413	167	1 329	2 043	—	1 612
1960-61	478	1 072	373	545	439	166	1 436	2 402	—	1 920
1961-62	514	1 122	935	1 325	451	128	1 554	2 164	—	2 294
1962-63	511	1 208	512	528	377	155	1 501	2 663	—	2 254
1963-64	507	1 191	639	385	370	160	1 620	1 932	49	2 203
1964-65	503	957	915	227	299	209	1 513	1 323	225	2 686
1965-66	596	1 154	1 362	196	493	212	1 787	394	726	3 300
1966-67	618	1 200	1 037	427	455	270	1 946	341	1 999	3 653
1967-68	585	1 118	1 624	343	685	300	1 752	225	2 786	4 473
1968-69	566	1 160	1 401	174	947	248	1 700	125	2 108	4 864
1969-70	553	1 123	1 578	67	801	219	1 390	50	2 608	4 043
1970-71	529	1 090	610	201	793	335	1 607	—	3 488	5 984
1971-72	588	1 207	581	507	859	433	1 469	52	2 971	6 808
1972-73	589	1 235	915	461	497	392	1 583	515	2 172	5 739
1973-74	594	1 268	598	371	1 187	7 728	1 514	1 158	2 060	7 014
1974-75	616	1 343	760	631	651	828	1 525	1 261	2 108	6 928
1975-76	607	1 347	143	473	1 238	375	1 229	690	2 429	8 511
1976-77	640	1 439	37	783	1 130	413	1 117	498	2 368	11 713
1977-78	655	1 466	n.y.a.	n.y.a.	n.y.a.	n.y.a.	n.y.a.	n.y.a.	n.y.a.	n.y.a.

(a) Year ended December of the first year named.

(b) Landed at Tasmanian ports; estimated live weight.

(c) Includes crabs, squid, oysters and seaweed

(Chapter 9)

Principal Articles Produced in Factories

(NOTE: Details of production of a number of important articles cannot be published because of confidentiality.)

Year	Foodstuffs					Refined metal
	Butter (factory and farm) (a)	Cheese (factory and farm)	Bacon and ham (cured weight) (b)	Flour (incl.) wheatmeal for baking)	Aerated waters	Zinc
	tonnes	tonnes	tonnes	tonnes	'000 litres	tonnes
1939-40	5 380	1 470	1 313	17 137	1 650	74 012
1944-45	4 157	1 200	1 209	20 442	2 855	80 612
1949-50	5 614	428	1 007	24 714	4 510	85 122
1954-55	8 707	278	1 043	27 037	5 123	102 071
1955-56	10 378	338	1 057	25 272	5 623	105 572
1956-57	10 835	350	1 070	26 355	5 537	108 333
1957-58	11 019	382	1 073	25 981	6 346	116 977
1958-59	11 178	387	1 144	26 844	7 519	116 554
1959-60	12 079	372	1 162	28 007	8 356	119 785
1960-61	10 552	399	1 138	26 388	8 656	127 957
1961-62	12 376	641	1 149	26 356	8 828	131 140
1962-63	13 405	681	1 201	26 442	9 683	138 391
1963-64	13 984	1 358	1 185	24 868	9 938	140 835
1964-65	14 218	2 388	1 190	25 367	10 310	141 006
1965-66	14 229	2 989	1 079	25 022	11 111	146 221
1966-67	14 541	3 822	1 262	24 470	11 583	146 227
1967-68	13 999	4 724	1 302	23 957	12 029	131 872
1968-69	16 017	5 820	1 416	23 826	12 644	151 094
1969-70	16 343	5 407	1 403	21 947	13 354	170 931
1970-71	15 273	5 556	1 803	22 264	14 049	162 271
1971-72	15 318	5 923	1 984	22 488	14 402	175 798
1972-73	12 947	7 218	1 902	31 698	15 236	193 782
1973-74	12 398	8 475	1 931	34 643	15 751	182 749
1974-75	12 196	12 387	2 169	34 938	14 845	152 749
1975-76	10 762	13 332	2 356	30 691	16 219	137 637
1976-77	9 707	13 156	2 434	32 427	18 786	170 685
1977-78	7 862	13 903	2 505	32 780	20 081	161 173

Principal Articles Produced in Factories—continued

Year	Chemicals, fertilisers, etc.			Timber	Miscellaneous	
	Sulphuric acid	Super-phosphate	Sulphate of ammonia	Sawn, peeled or sliced (c)	Newsprint	Electricity (d)
	tonnes	tonnes	tonnes	m ³	tonnes	mkWh
1939-40	14 552	33 337	—	189 690	—	612
1944-45	15 124	28 519	—	197 687	24 373	796
1949-50	42 747	69 943	—	298 160	30 961	1 062
1954-55	70 676	77 034	—	331 270	74 789	1 589
1955-56	72 310	86 671	—	355 452	80 283	1 794
1956-57	96 432	83 263	39 833	320 320	80 878	2 210
1957-58	113 701	106 420	50 546	308 092	82 386	2 338
1958-59	127 759	108 616	56 924	344 529	84 404	2 456
1959-60	129 077	104 260	58 525	400 351	89 931	2 532
1960-61	137 178	106 285	62 574	388 257	89 452	2 632
1961-62	138 636	121 143	62 319	351 566	91 199	2 733
1962-63	142 227	127 426	53 274	377 237	91 693	3 213
1963-64	161 381	134 233	43 506	403 178	93 516	3 409
1964-65	184 936	132 445	60 772	420 204	94 637	3 780
1965-66	198 551	162 441	65 135	421 164	94 707	3 896
1966-67	211 201	166 757	58 422	411 524	98 816	4 116
1967-68	185 303	145 968	13 086	413 485	94 135	3 773
1968-69	206 474	140 340	40 324	414 391	125 924	4 738
1969-70	266 449	133 245	40 563	413 653	173 314	5 140
1970-71	387 193	105 323	40 252	406 104	178 683	5 451
1971-72	558 658	104 763	41 358	412 846	181 477	5 778
1972-73	652 513	177 192	48 654	416 290	199 053	5 902
1973-74	570 156	180 458	33 191	414 320	200 852	6 010
1974-75	517 052	103 253	54 701	410 150	196 240	6 095
1975-76	466 817	57 896	23 040	373 470	206 228	6 008
1976-77	506 338	101 281	12 291	368 160	206 590	6 842
1977-78	522 154	97 012	5 292	338 540	207 621	7 179

(a) Includes butter equivalent of butter oil and from 1965-66 excludes farm production.

(b) Includes non-factory production. From July 1970 all weights are on a bone-in basis; earlier figures include an element of unconverted bone-out weights.

(c) Includes hardwood and softwood.

(d) Mainly output of Hydro-Electric Commission.

(Chapter 9)

Manufacturing

Year	Number of factories at end of year	Employment (a)			Salaries and wages paid (b) (\$'000)	Materials used (\$'000)	Value of output (c) (\$'000)	Value of production (d) (\$'000)	Value of	
		Males	Females	Persons					Land and buildings (\$'000)	Plant and machinery (\$'000)
1910	635	8 277	1 703	9 980	n.a.	n.a.	n.a.	n.a.	2 044	2 092
1915	589	7 161	1 259	8 420	1 567	4 387	8 431	3 823	2 265	2 457
1920	616	8 746	1 479	10 225	2 960	8 469	14 304	5 525	1 963	3 863
1924-25	675	9 016	1 982	10 998	3 776	6 885	15 685	7 251	4 209	13 457
1929-30	845	8 547	2 273	10 820	4 056	8 025	17 121	7 124	5 994	13 894
1934-35	926	8 321	2 234	10 555	3 204	6 260	14 446	6 316	5 390	12 138
1939-40	980	11 754	2 916	14 670	5 372	10 821	25 987	12 506	7 551	13 576
1940-41	1 002	12 341	3 498	15 839	6 119	12 377	27 735	12 584	8 474	15 098
1941-42	994	13 389	4 167	17 556	7 442	14 922	32 622	14 429	8 769	15 226
1942-43	992	13 941	4 369	18 310	8 946	17 393	37 408	16 151	9 854	16 267
1943-44	994	14 697	5 094	19 791	10 387	19 144	41 696	18 091	10 586	16 129
1944-45	1 006	14 756	4 755	19 511	10 017	19 934	42 714	17 805	10 983	15 934
1945-46	1 082	15 105	4 130	19 235	10 013	20 616	44 239	18 391	10 609	16 461
1946-47	1 169	16 186	3 751	19 937	11 276	22 650	49 139	21 335	11 356	17 000
1947-48	1 225	17 208	3 965	21 173	13 731	27 311	57 569	24 489	12 543	19 832
1948-49	1 346	18 508	4 094	22 602	16 913	34 319	73 314	32 149	14 670	24 507
1949-50	1 456	19 302	4 204	23 506	19 293	43 468	90 160	38 671	17 299	27 456
1950-51	1 486	19 454	4 373	23 827	23 475	58 290	117 249	49 229	20 701	34 312
1951-52	1 512	19 934	4 093	24 027	29 407	71 804	143 853	59 588	24 999	41 181
1952-53	1 504	19 621	3 874	23 495	31 953	67 333	142 007	60 997	29 925	45 240
1953-54	1 545	20 249	4 340	24 589	34 763	74 851	155 822	66 129	53 993	54 984
1954-55	1 597	21 045	4 407	25 452	37 727	84 930	177 202	76 228	59 206	59 758
1955-56	1 594	22 128	4 934	27 062	43 196	95 882	207 558	91 862	93 158	80 849
1956-57	1 595	22 482	5 188	27 670	47 273	101 274	220 780	97 365	112 946	89 672
1957-58	1 655	23 081	5 003	28 084	50 641	100 582	227 651	103 660	118 906	93 719
1958-59	1 666	23 504	4 920	28 424	51 656	103 093	236 587	108 602	123 660	96 451
1959-60	1 683	24 408	5 254	29 662	57 573	119 822	268 050	120 392	144 024	107 315
1960-61	1 766	24 811	5 347	30 158	60 659	122 508	275 902	124 892	147 099	112 632
1961-62	1 760	24 742	5 328	30 070	61 440	126 128	283 547	127 874	159 149	121 589
1962-63	1 764	25 453	5 302	30 755	64 837	131 100	303 920	142 033	163 919	138 159
1963-64	1 746	26 221	5 612	31 833	70 582	154 613	341 065	152 571	168 403	141 651
1964-65	1 805	26 768	5 812	32 580	76 515	175 920	381 549	167 251	209 010	155 336
1965-66	1 792	28 041	6 274	34 315	82 963	188 678	404 581	175 606	211 923	158 672
1966-67	1 771	28 364	6 515	34 879	90 756	201 027	437 964	194 571	233 983	169 159
1967-68	1 797	28 550	6 628	35 178	96 236	203 084	445 076	198 019	263 364	184 683

(a) Commencing with 1927-28, the number of persons employed is the average over the whole year; prior to the date the number represents the average over the period of operation.

(b) Excludes amounts drawn by working proprietors.

(c) Value of goods manufactured and work done.

(d) Value of output less recorded costs of manufacture other than labour.

(Chapter 9)

Economic Censuses: Manufacturing (a)

Year (b)	Establishments operating at 30 June	Employment (averaging over whole year) (c)			Wages and salaries	Turnover (d)	Purchases, transfers in and selected expenses (e)	Value added (f)	Fixed capital expenditure (g)
		Males	Females	Persons					
1968-69	no. 951	no. 24 892	no. 6 182	no. 31 074	\$'000 95 065	\$'000 487 109	\$'000 301 739	\$'000 197 464	\$'000 35 080
1969-70	945	25 371	6 389	31 760	102 104	541 636	317 546	226 083	49 443
1971-72	933	24 856	6 151	31 007	119 411	595 612	359 300	245 068	25 944
1972-73	912	24 668	6 016	30 684	130 703	678 763	394 628	283 420	24 893
1973-74	935	25 203	6 324	31 527	161 386	818 049	494 785	340 250	24 798
1974-75(b)	628	23 699	5 153	28 852	194 883	905 656	558 632	402 255	53 146
1975-76	667	22 827	4 926	27 753	211 327	1 029 579	577 393	456 029	43 936
1976-77	617	23 042	4 724	27 766	246 014	1 199 311	694 445	533 288	34 472

(a) Details are not comparable with those contained in the preceding table.

(b) No census was conducted in 1970-71. From 1974-75 figures exclude details for single establishment enterprises with less than four persons employed.

(c) Includes working proprietors and employees at separately located administrative and ancillary units.

(d) Turnover plus increase (or less decrease) in the value of stocks less purchases, transfers in and selected expenses.

(e) Includes transfers in of goods from other establishments of the enterprise, charges for commission and sub-contract work, repair and maintenance expenses, outward freight and cartage, motor vehicle running expenses and sales commission payments.

(f) Comprises sales of goods, transfers out of goods to establishments of the same enterprise, bounties and subsidies on production, all other operating revenue from outside the enterprise and capital work done for own use, rental or lease.

(Chapter 9)

Hydro-Electric Commission

Year	Installed generator capacity	Number of retail consumers	Consumption per retail consumer	Gross revenue	Working expenses and other changes
	KW	no.	KWH	\$'000	\$'000
1929-30	49 000	n.a.	n.a.	692	636
1934-35	54 250	n.a.	n.a.	814	754
1939-40	104 500	n.a.	n.a.	1 212	1 172
1944-45	160 500	55 073	3 110	1 776	1 588
1949-50	184 500	75 927	4 201	2 938	2 926
1959-60	541 150	117 266	6 480	14 570	14 932
1964-65	856 550	131 593	7 779	25 009	23 500
1965-66	807 550	134 679	7 958	26 293	25 569
1966-67	849 150	135 941	8 571	28 299	27 058
1967-68	945 300	139 886	8 247	27 627	28 607
1968-69	1 005 600	143 551	8 712	33 638	31 824
1969-70	1 031 600	146 958	9 059	37 296	35 095
1970-71	1 281 200	149 911	9 252	40 151	40 070
1971-72	1 309 200	152 934	9 782	46 286	46 278
1972-73	1 352 400	156 570	9 876	49 511	49 297
1973-74	1 342 400	160 307	10 165	52 730	54 026
1974-75	1 462 400	163 479	10 864	62 295	61 870
1975-76	1 442 400	167 507	11 191	72 699	72 312
1976-77	1 492 400	171 847	12 071	80 372	80 292
1977-78	1 636 400	176 005	12 434	95 519	95 269

(Chapter 10)

Value of Retail Sales by Commodity Groups
(\$ Million)

Year	Groceries	Butchers' meat	Other food (a)	Beer, wine, spirits (b)	Clothing drapery piece-goods, footwear	Domestic hardware (c)	Electrical goods (d)	Furniture floor coverings	Other goods (e)	Total (excl. motor vehicles, etc.)
1952-53 (f)	17.3	9.1	11.9	10.7	25.7	3.1	4.6	4.9	16.3	103.6
1956-57 (f)	23.4	11.1	15.1	14.8	30.4	3.3	6.3	6.4	20.3	131.1
1961-62 (f)	28.6	13.9	20.0	17.0	35.3	4.1	10.7	7.2	29.3	166.1
1963-64	29.3	14.9	21.4	16.9	36.0	4.4	11.7	7.8	30.5	172.9
1964-65	31.6	15.5	20.6	18.5	38.4	4.4	11.5	7.9	31.8	180.2
1965-66	33.6	17.1	21.9	18.9	40.6	4.4	11.3	8.5	34.7	191.0
1966-67	35.2	17.8	22.7	20.3	41.6	4.5	11.2	8.7	36.3	198.3
1967-68	36.5	19.4	24.2	23.3	45.5	5.1	11.7	10.1	39.2	215.0
1968-69 (f)	37.3	19.9	26.1	25.0	48.9	5.5	12.4	11.2	41.6	227.9
1969-70	41.7	20.7	23.1	30.9	49.5	8.8	13.4	12.6	49.9	257.6
1970-71	45.2	21.0	30.7	28.7	62.2	6.1	13.3	12.9	49.4	256.0
1971-72	45.2	21.3	32.6	30.7	55.6	6.7	13.6	13.5	52.9	272.1
1972-73	50.0	22.2	33.9	32.4	59.7	7.5	15.4	14.4	55.8	291.3
1973-74 (f)	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	319.3
1974-75	63.8	26.2	35.8	47.8	76.1	14.4	24.5	21.4	64.6	374.5
1975-76	76.7	31.3	47.2	61.7	100.3	17.1	36.1	28.9	86.1	485.4
1976-77	87.3	31.2	49.7	68.8	101.6	22.1	48.3	31.7	91.6	532.3
1977-78	110.0	35.6	57.8	77.5	117.1	24.4	56.5	34.4	103.0	616.3
	120.3	36.2	63.8	88.1	133.0	29.0	54.3	38.9	117.3	680.9

(a) Includes fresh fruit and vegetables, confectionery, soft drinks, ice cream, cakes, pastry, cooked provisions, fish, etc., but excludes some delivered milk and bread.

(b) Excludes sales from licensed clubs.

(c) Excludes basic building materials (e.g. timber, roofing tiles, etc.), builders' hardware and supplies.

(d) Includes radios, televisions and accessories, musical instruments, domestic refrigerators, etc.

(e) Includes tobacco, cigarettes, newspapers, books, stationery, chemists' goods, jewellery, etc.

(f) Census figures.

(Chapter 10)

Value of Trade by Sea and Air and Vessels Entered and Cleared Tasmanian Ports

Year	Imports				Exports				Vessels entered Tasmanian ports	
	By sea		By air	Total	By sea		By air	Total	Overseas and inter- state (a)	
	Overseas	Interstate	Interstate		Overseas	Interstate	Interstate		no.	'000 net tons
	\$'000	\$'000	\$'000	\$'000	\$'000	\$'000	\$'000	\$'000		
1830.....	n.a.	n.a.		510	n.a.	n.a.		292	101	27
1840.....	n.a.	n.a.		1 976	n.a.	n.a.		1 734	492	85
1850.....	n.a.	n.a.		1 318	n.a.	n.a.		1 288	674	104
1860.....	1 686	450		2 136	1 544	380		1 924	806	116
1870.....	698	888		1 586	562	736		1 298	613	106
1880.....	738	2 000		2 738	1 568	1 456		3 024	654	205
1890.....	1 594	2 202		3 796	792	2 182		2 974	746	476
1900.....	1 402	2 746		4 148	3 078	2 144		5 222	741	619
1910.....	1 662	(b)		n.a.	1 040	(b)		n.a.	979	1 211
1919-20.....	1 626	(b)		n.a.	4 022	(b)		n.a.	841	632
1929-30.....	3 668	16 028		19 696	4 978	13 198		18 176	1 076	1 390
1930-31.....	1 582	12 878		14 460	4 214	9 754		13 968	992	1 319
1931-32.....	1 130	11 938		13 068	4 106	9 980		14 086	980	1 307
1932-33.....	1 128	12 464		13 592	3 582	9 790		13 372	1 030	1 461
1933-34.....	1 274	13 582	n.a.	14 856	4 766	10 254	n.a.	15 020	1 066	1 547
1934-35.....	1 476	14 452		15 928	4 318	11 844		16 162	1 128	1 610
1935-36.....	2 498	17 134		19 632	5 502	13 116		18 618	1 191	1 977
1936-37.....	2 586	18 858		21 444	6 822	14 376		21 198	1 317	2 093
1937-38.....	3 858	19 854		23 712	5 774	16 500		22 274	1 377	2 202
1938-39.....	2 838	20 166		23 004	6 796	17 670		24 466	1 384	2 231
1939-40.....	3 188	21 780		24 968	4 852	20 954		25 806	1 243	1 512
1940-41.....	2 364	21 876		24 240	3 120	24 052		27 172	1 147	1 264
1941-42.....	1 918	24 276		26 194	3 746	28 566		32 312	1 031	1 030
1942-43.....	2 300	26 236		28 536	1 770	30 680		32 450	873	760
1943-44.....	2 384	26 162		28 546	2 298	35 288		37 586	804	796
1944-45.....	1 664	27 796		29 460	5 062	36 708		41 770	760	732
1945-46.....	2 614	29 400		32 014	7 224	33 040		40 264	728	833
1946-47.....	3 626	37 810		41 436	10 162	32 932		43 094	751	957
1947-48.....	8 564	44 000		52 564	18 566	35 066		53 632	787	1 106
1948-49.....	12 512	46 674		59 186	24 980	37 064		62 044	805	1 125
1949-50.....	18 704	51 218	(c) 10 670	80 592	29 936	42 672	(c) 3 996	76 604	862	1 183
1950-51.....	25 058	60 636	18 326	104 020	48 514	53 740	6 392	108 646	905	1 279
1951-52.....	41 422	76 024	20 474	137 920	37 024	71 684	6 018	114 726	902	1 323
1952-53.....	26 632	76 658	19 936	123 226	43 696	72 804	11 568	128 068	1 012	1 480
1953-54.....	26 098	87 438	22 164	135 700	35 466	81 488	13 580	130 534	1 060	1 508
1954-55.....	30 258	89 958	19 148	139 364	37 524	85 376	14 494	137 394	1 081	1 620
1955-56.....	24 884	99 608	21 166	145 658	40 608	100 630	18 762	160 000	1 030	1 586
1956-57.....	27 764	105 788	20 020	153 572	45 004	108 654	18 112	171 770	1 161	1 737
1957-58.....	25 466	113 636	19 122	158 224	44 506	109 652	18 354	172 512	1 241	1 872
1958-59.....	26 374	121 138	19 718	167 230	43 932	114 424	17 584	175 940	1 257	1 966
1959-60.....	27 606	130 014	19 210	176 830	47 730	137 530	20 818	206 078	1 308	2 287
1960-61.....	37 208	141 086	19 356	197 650	42 588	143 036	21 944	207 568	1 354	2 546
1961-62.....	26 788	141 776	18 000	186 564	57 196	140 794	23 298	221 288	1 533	3 042
1962-63.....	35 746	150 620	18 158	204 524	66 792	146 454	21 602	234 848	1 614	3 474
1963-64.....	35 032	167 964	19 840	222 836	78 318	173 590	23 424	275 332	1 508	3 346
1964-65.....	35 717	170 963	20 819	227 449	87 315	193 371	25 770	306 456	1 472	3 412
1965-66.....	43 585	192 732	21 123	257 441	92 007	212 785	25 575	330 367	1 645	3 887
1966-67.....	51 376	209 456	20 311	281 143	88 834	224 975	25 680	339 490	(d) 1 684	(d) 4 085
1967-68.....	45 024	220 065	20 590	285 679	76 888	233 694	26 941	337 524	1 676	4 102
1968-69.....	37 509	241 398	21 051	299 958	102 061	265 476	25 825	393 362	1 795	4 645
1969-70.....	46 998	257 441	20 551	324 989	143 470	286 083	26 287	455 840	1 759	5 574
1970-71.....	45 719	269 022	19 777	334 519	143 198	277 669	27 103	447 970	1 639	5 338
1971-72.....	39 749	281 576	20 622	341 947	178 950	302 608	29 374	510 932	1 754	5 937
1972-73.....	45 045	289 862	21 238	356 145	218 712	320 910	30 626	570 247	1 788	7 239
1973-74.....	69 277	357 805	24 760	451 843	259 745	404 382	34 566	698 692	1 631	7 225
1974-75.....	100 616	402 081	26 850	529 547	226 154	379 933	31 699	637 786	1 611	6 820
1975-76.....	76 262	503 497	27 882	607 641	250 580	441 391	36 280	728 251	1 536	6 733
1976-77.....	94 622	564 231	30 909	689 762	338 657	485 850	35 160	859 667	1 592	7 258

(a) In this section each vessel is recorded as an entry at the first Tasmanian port of call only; intrastate movements are excluded.

(b) Collection discontinued until 1922-23.

(c) Not collected before 1949-50.

(d) From 1966-67 not comparable with previous years; details are now confined to vessels of over 200 registered net tons engaged solely in trade.

(Chapter 11)

Overseas and Interstate Exports of Selected Commodities, Tasmania

Year	Butter (incl. butter oil)		Fresh fruit— apples and pears		Meat		Cheese		Wool, greasy (a)	
	Quantity	Value	Quantity	Value	Quantity	Value	Quantity	Value	Quantity	Value
	tonnes	\$'000	tonnes	\$'000	tonnes	\$'000	tonnes	\$'000	tonnes	\$'000
1945-46	1 293	406	66 820	1 894	186	34	612	112	4 113	1 438
1946-47	1 340	688	19 908	1 028	312	83	993	180	5 275	2 706
1947-48	1 926	798	55 565	4 204	282	44	273	66	4 446	4 206
1948-49	2 475	1 268	31 481	2 366	789	122	181	41	6 365	6 758
1949-50	2 179	1 278	56 911	4 348	1 151	369	113	29	4 128	6 202
1950-51	1 958	1 173	64 841	6 828	915	302	63	17	5 446	18 688
1951-52	2 239	1 266	56 627	7 410	1 103	475	120	44	6 689	9 366
1952-53	2 397	1 802	77 288	11 578	1 753	818	39	18	7 643	12 030
1953-54	2 043	1 600	77 652	10 135	658	349	39	18	7 018	11 314
1954-55	3 944	3 026	72 112	8 950	1 676	814	73	39	8 011	12 190
1955-56	4 988	3 463	92 569	11 498	2 470	1 076	36	23	8 387	11 140
1956-57	6 101	3 452	58 836	7 936	2 074	883	102	73	9 392	16 198
1957-58	5 939	3 420	96 260	14 664	2 996	1 190	101	45	10 731	14 260
1958-59	7 065	4 828	87 781	11 338	5 469	2 415	69	51	11 415	12 106
1959-60	7 864	5 390	80 683	9 490	9 225	3 801	90	64	12 689	15 254
1960-61	5 419	3 298	92 730	11 226	6 896	3 212	60	47	11 068	12 560
1961-62	7 572	3 942	122 417	15 572	7 754	3 250	121	50	12 341	14 206
1962-63	8 597	4 368	108 438	17 508	9 933	4 737	578	269	11 919	15 338
1963-64	8 315	4 372	135 205	19 454	11 018	5 505	895	328	11 378	17 604
1964-65	10 374	5 914	99 410	14 260	12 881	6 645	1 707	761	13 756	16 593
1965-66	8 878	5 214	134 482	20 651	12 749	7 038	2 887	1 493	15 442	20 155
1966-67	9 140	5 259	96 085	11 872	13 727	7 939	3 530	1 642	16 238	20 373
1967-68	8 992	5 107	115 873	14 647	11 345	7 042	4 190	1 854	13 994	15 041
1968-69	9 243	5 129	96 242	13 154	12 910	7 989	1 930	884	15 998	18 592
1969-70	12 611	6 950	109 382	14 905	17 084	11 774	7 267	2 957	16 512	17 821
1970-71	10 664	5 954	96 670	13 474	15 755	10 706	6 259	2 589	17 145	14 350
1971-72	9 829	8 067	74 848	11 092	21 463	14 161	6 816	3 875	20 413	17 180
1972-73	7 437	6 104	84 066	11 566	23 061	20 368	6 656	4 085	17 735	34 579
1973-74	8 269	6 441	92 116	16 458	22 167	22 507	7 730	5 930	16 963	38 319
1974-75	5 012	4 460	57 473	10 261	18 456	12 237	10 386	7 922	15 947	26 640
1975-76	9 720	7 527	47 114	8 756	20 883	17 192	9 026	7 633	17 435	31 232
1976-77	4 363	3 851	24 847	5 732	22 951	20 281	14 552	12 317	16 204	33 685

(Chapter 11)

Overseas and Interstate Exports of Selected Commodities, Tasmania—continued

Year	Sheep skins (with and without wool)		Textile yarn and fabrics	Refined zinc		Ores and concentrates	Timber (dressed and undressed)		Woodchips	
	Quantity	Value	Value	Quantity	Value	Value	Quantity	Value	Quantity	Value
	tonnes	\$'000	\$'000	tonnes	\$'000	\$'000	m ³	\$'000	\$'000	\$'000
1945-46	1 890	326	4 599	75 454	4 214	1 668	73 206	1 132	—	—
1946-47	1 811	480	4 607	80 378	4 674	2 298	75 344	1 228	—	—
1947-48	963	452	5 681	66 411	4 906	3 074	96 188	1 584	—	—
1948-49	1 205	564	6 688	78 667	8 832	3 832	116 094	2 104	—	—
1949-50	1 500	816	5 580	81 999	9 964	4 076	146 625	2 930	—	—
1950-51	1 014	1 688	9 266	80 836	15 054	5 704	135 668	3 230	—	—
1951-52	1 434	1 232	7 498	77 090	18 606	11 714	134 604	4 428	—	—
1952-53	1 512	1 020	11 572	91 557	19 342	9 722	122 230	5 112	—	—
1953-54	1 333	1 098	13 552	97 593	17 222	8 544	135 751	6 700	—	—
1954-55	2 230	1 590	12 476	87 746	16 574	8 138	147 389	7 156	—	—
1955-56	1 873	1 356	14 674	100 611	19 888	10 836	140 938	6 570	—	—
1956-57	2 122	1 796	15 766	105 314	19 662	10 700	146 502	6 874	—	—
1957-58	2 138	1 674	16 112	105 541	18 190	8 088	132 242	4 616	—	—
1958-59	2 565	1 288	14 166	116 271	20 054	4 824	153 378	6 844	—	—
1959-60	3 216	2 078	17 524	115 680	22 922	5 952	177 931	8 952	—	—
1960-61	3 071	1 786	19 188	109 664	21 020	6 760	149 657	9 554	—	—
1961-62	3 050	1 892	21 278	133 012	23 680	6 030	134 033	8 588	—	—
1962-63	2 885	1 904	19 842	136 302	23 778	6 338	142 979	9 858	—	—
1963-64	3 359	2 844	21 918	134 201	27 910	9 102	168 480	11 176	—	—
1964-65	2 676	1 953	24 139	141 263	37 327	9 570	189 832	12 811	—	—
1965-66	3 268	2 465	24 077	137 257	38 331	11 302	174 297	12 145	—	—
1966-67	3 402	2 456	24 102	155 273	41 249	12 560	187 474	13 672	—	—
1967-68	2 722	1 369	25 487	120 312	33 106	17 816	183 817	13 492	—	—
1968-69	3 988	2 148	27 563	139 479	34 006	44 018	194 936	15 329	—	—
1969-70	3 236	1 790	27 784	163 847	42 625	63 478	207 242	16 238	—	—
1970-71	3 710	1 684	28 425	142 755	38 163	81 604	200 583	17 201	30	438
1971-72	3 765	1 799	29 938	194 259	55 149	88 777	202 331	17 385	301	4 354
1972-73	3 618	3 280	31 680	208 349	63 707	87 543	224 828	27 970	1 156	16 833
1973-74	2 303	2 926	41 174	190 293	77 143	94 381	270 248	22 556	2 138	31 019
1974-75	2 816	2 258	31 454	139 253	74 298	91 240	213 428	30 636	2 031	35 212
1975-76	2 943	2 413	41 656	138 243	74 926	92 588	238 440	25 867	1 734	35 524
1976-77	2 334	2 765	35 811	162 001	98 318	144 947	313 227	37 083	n.p.	n.p.

(a) Excludes greasy wool on exported skins.

(Chapter 11)

Motor Vehicle Registrations (a)

Year	Motor vehicles on the register at end of year					New motor vehicles registered during year			
	Motor cars and station wagons		Commercial vehicles ('000)	Motor cycles ('000)	Total ('000)	Motor cars and station wagons	Commercial vehicles	Motor cycles	Total
	Number ('000)	Persons per vehicle registered							
1924-25	5.8	36.9	(b) 0.8	2.7	9.3	n.a.	n.a.	n.a.	n.a.
1929-30	12.5	17.6	(c) 2.2	4.8	19.5	1 627	(c) 552	939	3 118
1934-35	12.9	17.8	3.0	3.9	19.8	982	422	171	1 575
1939-40	17.6	13.6	5.2	3.4	26.2	1 400	540	176	2 116
1944-45	17.1	14.5	7.0	2.8	26.8	26	331	1	358
1945-46	17.4	14.5	7.8	3.2	28.4	43	351	73	467
1946-47	18.5	13.9	9.1	3.6	31.2	741	667	472	1 880
1947-48	19.9	13.1	10.2	4.1	34.2	1 541	1 084	621	3 246
1948-49	22.5	11.9	11.7	4.7	38.9	2 611	1 202	812	4 625
1949-50	25.3	10.9	12.9	4.9	43.2	3 311	1 565	886	5 762
1950-51	28.8	9.9	15.1	5.3	49.2	4 187	2 319	960	7 466
1951-52	32.5	9.1	16.8	5.7	55.1	4 267	2 073	938	7 278
1952-53	35.4	8.6	19.4	5.7	60.5	3 368	1 724	474	5 566
1953-54	40.0	7.7	19.7	5.6	65.4	4 178	1 896	450	7 064
1954-55	44.9	7.0	21.5	5.3	71.7	5 738	2 285	417	8 440
1955-56	48.0	6.6	21.9	4.8	74.7	5 457	2 179	332	7 968
1956-57	51.7	6.3	22.6	4.4	78.6	5 309	1 988	340	7 637
1957-58	55.9	6.0	23.9	4.0	83.8	5 337	1 944	225	7 506
1958-59	59.1	5.7	25.0	3.6	87.7	5 362	2 113	176	7 651
1959-60	63.7	5.4	26.4	3.1	93.2	6 527	2 115	96	8 738
1960-61	68.1	5.1	26.7	2.6	97.4	6 723	2 058	61	8 842
1961-62	72.8	4.9	27.4	2.4	102.6	6 931	1 778	59	8 768
1962-63	77.9	4.6	27.5	1.9	107.3	9 003	1 986	52	11 041
1963-64	84.4	4.3	28.0	1.7	114.1	10 268	2 343	53	12 664
1964-65	91.3	4.0	28.9	1.5	121.7	10 522	2 389	69	12 980
1965-66	96.8	3.8	29.7	1.5	128.0	10 133	2 878	207	13 218
1966-67	101.7	3.7	30.2	1.6	133.5	10 390	2 611	380	13 381
1967-68	107.7	3.5	31.1	2.2	141.0	11 738	2 412	751	14 901
1968-69	113.7	3.4	32.2	2.8	148.7	10 845	2 529	781	14 155
1969-70	118.6	3.3	32.6	3.1	154.3	11 399	2 456	799	14 654
1970-71	124.9	3.1	32.9	3.5	161.3	11 792	2 550	794	15 136
1971-72	130.2	3.0	33.8	3.8	167.8	11 961	2 492	978	15 431
1972-73	135.4	2.9	34.6	4.5	174.5	12 970	2 813	1 343	17 126
1973-74	141.2	2.8	35.3	6.1	182.6	13 674	2 846	2 600	19 120
1974-75	150.3	2.7	36.6	7.4	194.3	16 097	3 980	2 749	22 826
1975-76	156.9	2.6	39.1	6.8	202.8	14 410	3 971	1 831	20 212
1976-77	162.7	2.5	40.5	6.2	209.4	14 520	4 260	1 428	20 208
1977-78	171.9	2.4	41.2	5.0	218.1	13 884	4 170	972	19 026

(a) Includes State Government and Commonwealth Government-owned vehicles but excludes those belonging to the Defence Services.

(b) Trucks only.

(c) From 1929-30 includes trucks, utilities, panel vans and omnibuses.

(Chapter 11)

Motor Vehicles on Register and Traffic Accidents

Year	Motor vehicles on the register at end of year (a)		Traffic accidents involving casualties					
	Number ('000)	Persons per vehicle registered	Accidents		Persons			
			Number	Per 10 000 vehicles registered (b)	Killed		Injured	
					Number	Per 10 000 vehicles registered (b)	Number	Per 10 000 vehicles registered (b)
1949-50	43.2	6.4	969	242	64	16.0	1 154	288
1954-55	71.7	4.4	864	127	57	8.3	1 111	163
1959-60	93.2	3.7	743	82	79	8.7	1 004	111
1960-61	97.4	3.6	844	89	75	7.9	1 157	121
1961-62	102.6	3.5	872	87	72	7.2	1 207	121
1962-63	107.3	3.4	919	87	67	6.4	1 354	129
1963-64	114.1	3.2	1 118	101	80	7.2	1 656	150
1964-65	121.7	3.0	1 180	100	97	8.2	1 692	143
1965-66	128.0	2.9	1 291	103	88	7.0	1 955	157
1966-67	133.5	2.8	1 356	104	102	7.8	2 081	159
1967-68	141.0	2.7	1 268	92	112	8.2	1 990	145
1968-69	148.7	2.6	1 400	97	122	8.4	2 228	154
1969-70	154.3	2.5	1 413	93	122	8.0	2 268	150
1970-71	161.3	2.4	1 396	89	124	7.9	2 031	129
1971-72	167.8	2.3	1 371	83	118	7.2	1 984	120
1972-73	174.5	2.3	1 423	83	83	4.8	2 052	119
1973-74	182.6	2.2	1 454	81	126	7.0	2 046	114
1974-75	194.3	2.1	1 466	77	120	6.3	2 061	108
1975-76	202.8	2.0	1 502	74	107	5.3	2 160	107
1976-77	209.4	2.0	1 606	77	103	4.9	2 314	110
1977-78	218.1	1.9	1 674	78	118	5.5	2 402	112

(a) Includes cars, commercial vehicles, motor cycles and Commonwealth-owned vehicles other than Defence Services' vehicles.

(b) Based on average number of motor vehicles (including motor cycles) on the register.

(Chapter 11)

Metropolitan Transport Trust Passenger Services

Year	Metropolitan Transport Trust (a)						Revenue (b)	Expenditure (c)
	Hobart and Launceston services							
	Route kilometres open for traffic	Hobart		Launceston				
		Vehicle kilometres	Passenger journeys	Vehicle kilometres	Passenger journeys			
		daily average	daily average	daily average	daily average	\$'000	\$'000	
1955-56	121	10 602	50 028	4 060	18 006	1 304	1 690	
1960-61	198	16 964	49 946	5 058	17 462	1 997	2 586	
1961-62	203	17 022	48 994	5 055	17 217	1 955	2 629	
1962-63	208	16 732	48 051	4 736	16 279	1 905	2 537	
1963-64	222	17 537	47 554	4 775	15 731	1 882	2 584	
1964-65	224	17 566	45 985	4 598	15 183	1 829	2 606	
1965-66	243	17 239	43 383	4 760	14 767	1 964	2 749	
1966-67	248	17 323	42 967	4 843	14 728	2 124	3 008	
1967-68	259	17 408	41 803	4 947	13 953	2 158	3 122	
1968-69	286	17 745	40 675	4 730	13 365	2 270	3 250	
1969-70	290	17 886	39 932	4 801	13 018	2 332	3 358	
1970-71	290	18 055	40 058	4 633	12 521	2 321	3 741	
1971-72	291	17 703	37 584	4 585	11 708	2 639	3 949	
1972-73	308	17 106	36 572	4 530	11 397	2 659	4 333	
1973-74	314	17 585	38 027	4 604	11 988	2 751	5 283	
1974-75	364	19 031	40 791	4 650	12 055	2 916	8 299	
1975-76	357	19 850	40 646	4 704	11 969	3 000	8 084	
1976-77	358	20 791	39 507	4 219	11 283	2 862	8 945	
1977-78	365	21 405	39 314	4 269	10 767	3 547	10 151	

(a) Includes tram, omnibus and trolley-bus services originally under Municipal control but taken over by Metropolitan Transport Trust on 1.7.55. Trams ceased operating: Hobart 21.10.60; Launceston 13.12.52.

(b) Prior to 1955-56 includes government grants; see note (a) above.

(c) Includes interest, redemption and depreciation.

(Chapter 11)

Government Railways

Year	Kilometres open	Revenue train kilometres run	Passenger journeys.	Goods and livestock carried	Gross revenue (a)	Working expenses (b)
	km	'000 km	'000	'000 tonnes	\$'000	\$'000
1880	72	180	103	21	48	34
1885	138	278	159	29	62	72
1890 (c)	565	890	464	143	212	172
1895	676	1 172	527	207	300	240
1900	707	1 313	683	313	406	320
1904-05	745	1 522	824	400	488	344
1909-10	756	1 706	1 650	447	568	424
1914-15	858	1 617	1 751	415	646	452
1919-20	1 012	2 039	2 268	584	1 012	780
1924-25	1 083	2 187	2 656	702	1 096	1 064
1929-30	1 093	2 420	2 243	642	1 014	1 070
1034-35	1 038	1 979	2 133	689	800	944
1939-40	1 036	3 322	2 412	893	1 072	1 374
1944-45	1 033	3 542	3 261	939	1 800	2 334
1949-50	987	3 347	3 230	782	2 098	3 456
1959-60	866	2 494	2 292	1 210	5 616	6 224
1964-65	805	2 047	1 340	1 109	5 580	6 644
1965-66	805	2 065	1 304	1 089	5 985	6 934
1966-67	805	2 052	1 197	1 096	6 588	7 707
1967-68	805	2 007	1 087	1 181	6 587	8 103
1968-69	805	1 926	1 045	1 262	6 947	8 461
1969-70	805	1 899	907	1 278	6 920	8 391
1970-71	805	1 764	871	1 220	5 867	9 222
1971-72	805	1 767	785	1 299	6 123	9 726
1972-73	816	1 960	752	1 554	6 834	11 012
1973-74	841	2 153	693	1 828	7 674	14 465
1974-75	851	1 983	429	1 731	8 265	18 604
1975-76 (d)	849	1 748	151	1 610	8 048	20 611
1976-77	851	1 667	140	1 644	8 780	21 812

(a) Excludes government grants.

(b) Excludes provision for depreciation and interest.

(c) The Hobart-Launceston line was constructed and operated by the Tasmanian Main Line Railway Coy. Ltd. until 1890, when the line was taken over by the Tasmanian Government Railways.

(d) The Tasmanian Government Railways were taken over by the Australian National Railways Commission from 1 July 1975.

(Chapter 11)

Postal Services

Year	Mail posted in Tasmania or received from overseas				Money orders				Postal notes and postal orders (a)			
					Issued		Paid		Issued		Paid	
	Letters and post-cards	News-papers and packets	Parcels	Registered articles	Number	Value	Number	Value	Number	Value	Number	Value
1929-30	'000 39 956	'000 7 128	'000 198	'000 307	'000 124	\$'000 1 104	'000 106	'000 954	'000 452	'000 314	'000 2 730	'000 2 098
1934-35	35 746	5 405	121	253	103	1 006	97	958	520	340	2 998	1 760
1939-40	33 874	5 525	132	314	126	1 372	113	1 278	582	418	3 236	1 970
1944-45	37 804	5 885	350	621	131	1 962	115	1 784	557	402	3 966	2 522
1949-50	50 038	8 440	368	674	167	2 428	151	2 218	670	514	6 967	4 270
1954-55	42 999	9 107	268	625	218	3 740	199	3 338	522	432	1 740	1 614
1955-56	43 329	9 531	266	655	231	3 800	305	5 342	534	440	1 475	1 450
1956-57	43 690	9 882	236	611	237	4 186	230	4 148	472	392	1 071	976
1957-58	44 306	9 564	258	556	253	4 338	217	3 862	459	396	755	680
1958-59	46 741	9 553	257	512	264	4 316	189	3 664	436	394	504	458
1959-60	43 020	9 629	233	456	264	4 358	198	3 744	433	402	335	292
1960-61	43 242	9 432	231	404	260	4 564	203	3 978	401	382	232	226
1961-62	42 603	9 714	242	390 (b)	284 (b)	6 792 (b)	221 (b)	6 160 (b)	390	376	218	216
1962-63	45 202	9 183	237	379	307	7 932	242	7 266	394	384	247	240
1963-64	47 452	9 340	232	371	342	8 548	353	7 852	388	390	208	212
1964-65	49 108	9 549	263	371	366	9 356	363	8 768	368	378	206	212
1965-66	51 710	10 309	288	375	353	11 576	274	10 902	356	384	206	213
1966-67	55 594	10 531	302	379	364	12 690	298	12 042	344	467	208	268
1967-68	55 273	10 141	303	349	322	13 468	266	12 727	350	599	201	351
1968-69	56 516	9 425	282	325 (c)	271 (c)	5 870 (c)	216 (c)	5 220 (c)	378	731	212	448
1969-70	58 824	8 953	300	312	265	5 229	211	4 516	428	871	223	512
1970-71	57 916	8 640	353	313	214	4 624	167	4 257	496	1 295	276	784
1971-72	54 780	6 773	352	268	166	4 335	128	3 722	498	1 514	263	942
1972-73	63 187		358	228	165	4 416	128	3 826	505	1 605	285	1 078
1973-74	63 272		289	203	149	4 629	115	3 960	507	1 824	288	1 188
1974-75	59 644		308	193	152	5 970	116	4 970	484	1 945	271	1 239
1975-76	44 829	5 528	220	132	129	6 418	100	5 489	334	1 504	178	877
1976-77	45 406	5 627	210	126	128	7 117	119	6 006	257	1 215	127	661

(a) On 1 June 1966 Postal Notes were replaced by Postal Orders. Until September 1967 the highest denomination available was \$4. In October 1967 denominations of \$5, \$6, \$7 and \$8 were introduced, followed in October 1970 by denominations of \$9 and \$10. (b) From 1961-62 to 1967-68 includes official Money Orders used in bringing to account telephone account collections and War Service Homes repayments. (c) The practice referred to in note (b) above was discontinued towards the end of 1967-68.

(Chapter 11)

Telecommunication, Radiocommunication, Broadcasting and Television

Year	Telegrams		Telephones			Radiocommunication, broadcasting and television		
	Despatched to and received from other countries	Despatched to places within Australia	Telephone exchanges	Telephone services connected at end of period		Stations		
				Lines	Instruments	Radio-communication	Broad-casting	Television
	'000	'000	no.	'000	'000	no.	no.	no.
1929-30	19	455	360	12	15	20	3	..
1934-35	18	387	342	12	15	40	4	..
1939-40	16	471	357	15	19	25	11	..
1944-45	30	826	354	17	22	22	11	..
1949-50	36	952	370	23	31	198	11	..
1954-55	41	648	390	34	46	434	12	..
1955-56	40	634	398	37	49	475	12	..
1956-57	41	598	407	39	53	555	12	..
1957-58	43	549	402	42	56	653	12	..
1958-59	40	545	400	44	60	748	12	..
1959-60	43	537	391	47	63	882	12	2
1960-61	42	528	383	49	67	1 107	12	2
1961-62	43	513	377	51	70	1 440	12	3
1962-63	42	515	371	54	75	1 768	12	3
1963-64	42	548	368	57	78	2 227	12	4
1964-65	52	550	365	59	82	2 574	12	4
1965-66	60	582	349	62	86	2 951	12	4
1966-67	53	621	331	65	89	3 561	12	4
1967-68	(a) 21	575	312	67	93	3 856	12	4
1968-69	24	562	288	70	98	4 377	12	4
1969-70	24	542	273	75	105	4 994	12	4
1970-71	36	499	257	78	114	5 499	12	4
1971-72	36	458	238	80	113	5 892	12	5
1972-73		473	230	85	118	6 390	12	5
1973-74		472	224	90	127	6 570	12	5
1974-75		424	212	96	133	7 347	12	5
1975-76		356	206	100	140	7 915	12	5
1976-77		298	198	105	146	8 687	15	5
1977-78		242	197	112	155	13 616	15	5

(a) From 1967-68 excludes telegrams received, details of which are no longer available.

Fire, Marine and General Insurance: Expenditure
(Chapter 12) (\$'000)

Year	Net claims	Other expenditure				Total
		Contributions to fire brigades	Commission and agents' charges	Expenses of management	Taxation	
1939-40	357	365				755
1944-45	357	12	147	241	115	871
1949-50	942	21	324	437	127	1 852
1954-55	2 743	64	787	1 093	288	4 976
1959-60	5 404	144	1 192	1 828	470	9 038
1964-65	7 854	230	1 601	2 662	692	13 038
1965-66	9 153	250	1 617	2 840	623	14 484
1966-67	16 158	242	1 760	3 248	664	22 071
1967-68	16 890	298	1 863	3 497	749	23 297
1968-69	10 865	508	2 063	3 929	588	17 953
1969-70	12 285	521	2 118	4 407	424	19 757
1970-71	13 214	583	2 388	4 942	626	21 753
1971-72	15 279	815	2 696	5 856	738	25 384
1972-73	18 249	979	2 999	6 364	780	29 371
1973-74	23 507	1 069	3 330	6 875	1 041	35 822
1974-75	29 979	1 371	4 002	8 102	376	44 217
1975-76	29 952	1 529	4 509	8 100	336	44 238
1976-77	42 010	2 483	4 472	11 844	627	61 420

Banking
(Chapter 12) (\$'000)

Year	Trading Banks (including Commonwealth Trading Bank) (a)			Savings Banks (b)	Year	Trading Banks (including Commonwealth Trading Bank) (a)			Savings Banks (b)
	Deposits	Advances	Debits to customers' accounts (c)			Deposits	Advances	Debits to customers' accounts (c)	
1935-36				13 636	1956-57	72 976	40 406	25 200	77 518
1936-37				14 430	1957-58	73 736	41 360	25 800	80 482
1937-38				15 384	1958-59	75 218	44 828	27 600	84 924
1938-39				16 792	1959-60	79 574	45 948	31 000	92 712
1939-40									
1940-41	n.a.	n.a.	n.a.	17 036	1960-61	76 454	48 010	32 600	94 776
1941-42				17 882	1961-62	78 952	49 340	32 080	102 460
1942-43				18 944	1962-63	83 178	53 176	35 068	112 856
1943-44				22 348	1963-64	86 210	55 122	37 062	124 770
1944-45				28 426	1964-65	94 604	54 176	41 340	135 736
1945-46				33 828	1965-66	102 507	55 214	43 105	148 401
1946-47	34 560	7 346	5 778	40 894	1966-67	112 091	60 460	47 103	167 106
1947-48	35 504	10 168	6 748	41 712	1967-68	117 811	69 297	51 222	177 827
1948-49	37 360	14 954	7 894	43 144	1968-69	124 473	72 394	55 896	190 043
1949-50	39 620	20 084	9 398	44 826	1969-70	131 501	77 603	61 173	199 790
	44 114	22 834	11 210	48 544					
1950-51	53 444	26 636	14 740	54 310	1970-71	133 587	86 976	64 177	217 663
1951-52	61 474	33 378	17 712	60 238	1971-72	135 099	88 098	69 970	242 856
1952-53	58 270	33 440	17 700	64 156	1972-73	159 141	99 192	85 291	288 986
1953-54	62 286	37 800	19 876	67 894	1973-74	207 040	121 077	103 041	328 029
1954-55	65 826	43 670	21 432	71 618	1974-75	229 851	137 189	119 447	382 326
1955-56	68 562	44 582	23 242	74 422	1975-76	277 377	157 951	150 536	430 618
					1976-77	348 613	207 635	179 932	477 134

(a) Average of weekly figures.

(b) Commonwealth, trustee and private. Private savings commenced operations in Tasmania as follows: A.N.Z., September 1961; National, May 1962; C.B.A., July 1962; C.B. C., March 1963; and Bank of Adelaide, November 1970.

(c) Excludes debits to Government accounts at Hobart City branches.

(Chapter 12)

Instalment Credit for Retail Sales (a)
(\$'000)

Year	Amount financed during period (b)						Balances outstanding at end of period (c)			
	Motor vehicles (d)		Household and personal goods		Total all goods		Type of business		Type of credit	
	Non-retail businesses	Retail businesses	Non-retail businesses	Retail businesses	Non-retail businesses	Retail businesses	Non-retail businesses (1)	Retail businesses (2)	Hire purchase (3)	Other instalment credit (4)
1965-66	18 017	400	11 126		29 543		37 495	7 645	37 915	7 225
1966-67	19 025	422	11 160		30 607		38 777	7 050	39 151	6 676
1967-68	21 909	430	12 058		34 397		43 141	6 457	42 311	7 287
1968-69	21 001	821	13 751		35 573		44 205	6 826	51 031	
1969-70	23 353	925	13 816		38 094		46 537	7 317	53 854	
1970-71	25 485	1 215	13 705		40 405		50 453	7 293	57 746	
1971-72	28 240	1 117	13 511		42 868		54 463	7 097	61 560	
1972-73	32 695	616	14 579		47 890		60 860	6 497	67 357	
	Finance businesses	Other businesses	Finance businesses	Other businesses	Finance businesses	Other businesses	Finance businesses	Other businesses		
1973-74	32 278	457	3 394	5 489	35 672	5 946	51 512	5 621	35 289	6 329
1974-75	40 409	371	4 028	5 753	44 437	6 124	63 544	4 352	43 778	6 783
1975-76	45 612	282	6 819	5 752	52 431	6 034	78 038	4 371	52 087	6 378
1976-77	54 738	175	7 465	5 951	62 203	6 125	95 463	4 137	60 224	8 104
1977-78	54 967	-	6 163	5 063	61 130	5 063	104 029	3 117	57 443	8 750

(a) A break in continuity of the series occurs in 1973-74. The classification for the pre-1973-74 categories 'retail businesses' and 'non-retail businesses' differs from the subsequent categories 'finance businesses' and 'other businesses' mainly in the treatment of incorporated finance subsidiaries of retailers. These were formerly included in the category 'retail businesses' but are subsequently covered in 'finance businesses'.

(b) Includes time payment, budget account, and personal loan schemes associated primarily with financing of retail sales of goods. However, it excludes the hiring charges, interest and insurance costs associated with these types of contracts.

(c) In contrast with 'amount financed' (see note (b)) these statistics include hiring charges, interest and insurance. N.B. total balances outstanding at end of period = (1) + (2) = (3) + (4).

(d) Includes new and used cars, boats, caravans, trailers and motor parts and accessories but excludes commercial type vehicles.

(Chapter 13)

Summary of Dwellings at Census Dates

Particulars	Date of Census							
	April 1921	June 1933	June 1947	June 1954	June 1961	June 1966	June 1971	June 1976
Dwellings (including hotels, boarding houses, flats, etc.)—								
Occupied	no. 45 818	52 484	62 484	78 789	91 258	99 366	110 483	122 573
Unoccupied	no. 2 934	2 421	2 351	5 288	8 582	10 800	13 302	15 786
Total	no. 48 752	54 905	64 835	84 077	99 840	110 166	123 785	138 359
Average inmates per occupied dwelling	no. 4.65	4.32	4.10	3.91	3.83	3.74	3.15	2.91
Occupied private dwellings according to Class of dwelling—								
Private house (including share)	no. 42 028	48 479	58 937	74 244	83 736	90 131	99 401	n.y.a.
Flat (including apartment)	no. 2 404	2 831	2 064	2 534	5 574	7 058	8 417	n.y.a.
Other	no. 44 432	51 310	461	869	888	1 093	1 785	n.y.a.
Total	no. 44 432	51 310	61 462	77 647	90 198	98 282	109 603	n.y.a.
Material of outer walls—								
Brick	no. 8 050	9 860	12 491	15 083	18 749	23 664	34 668	44 884
Stone	no. 1 786	1 651	1 768	1 555	1 335	1 194	1 355	1 524
Concrete	no. 274	411	1 064	2 703	3 487	3 522	3 064	6 404
Wood	no. 32 689	37 743	43 396	54 370	62 456	63 573	65 247	61 346
Asbestos-cement	no. 27	138	1 134	2 655	2 922	3 346	3 682	4 114
All other (including not stated)	no. 1 606	1 507	1 609	1 281	1 249	2 983	1 587	3 560
Nature of occupancy—								
Owner	no. 16 851	20 404	28 377	38 436	42 896	67 685	73 267	38 852
Purchaser by instalments	no. 4 364	3 986	4 140	9 810	19 006		44 432	
Tenant	no. 19 037	22 734	26 077	26 991	25 938	25 597	30 583	29 638
Other methods of occupancy (including not stated)	no. 4 180	4 186	2 868	2 410	2 358	5 000	5 753	8 910

Value of Building Approvals and Construction: All New Building
(\$'000)

(Chapter 13)

Year	Building approvals	Building construction								
		Commenced			Completed			Under construction at 30 June		
		Dwellings	Other building	Total	Dwellings	Other building	Total	Dwellings	Other building	Total
1946-47	6 726	3 728	1 708	5 436	2 308	526	2 834	3 614	1 904	5 518
1947-48	8 358	5 256	1 958	7 214	3 492	1 066	4 558	5 532	2 760	8 292
1948-49	11 742	7 960	2 782	10 742	6 042	1 578	7 620	7 670	4 074	11 744
1949-50	16 740	11 702	5 056	16 758	8 426	2 258	10 684	11 368	6 612	17 980
1950-51	21 694	15 000	5 672	20 672	13 508	3 298	16 806	14 250	10 106	24 356
1951-52	20 042	15 360	6 766	22 126	16 414	4 608	21 022	14 504	13 036	27 540
1952-53	15 984	10 664	2 558	13 222	15 252	6 078	21 330	10 608	10 380	20 988
1953-54	21 646	13 552	4 896	18 448	13 520	5 864	19 384	11 532	12 032	23 564
1954-55	25 612	15 244	6 428	21 672	13 092	8 206	21 298	13 992	10 806	24 798
1955-56	25 074	13 842	5 936	19 778	15 138	10 458	25 596	13 230	6 498	19 728
1956-57	30 964	15 138	13 138	28 276	16 434	8 784	25 218	12 420	11 750	24 170
1957-58	27 232	14 980	10 486	25 466	15 844	9 836	25 680	11 866	12 026	23 892
1958-59	27 592	16 662	12 156	28 818	15 986	10 914	26 900	12 742	13 364	26 106
1959-60	39 159	15 834	20 652	36 486	16 570	15 036	31 606	12 026	19 156	31 182
1960-61	30 539	15 936	12 344	28 280	17 206	16 822	34 028	10 912	15 016	25 928
1961-62	37 804	17 026	18 360	35 386	16 630	16 824	33 454	11 136	16 640	27 776
1962-63	37 416	16 668	17 944	34 612	16 892	17 240	34 128	10 912	17 500	28 412
1963-64	34 521	18 944	15 720	34 664	18 070	15 906	33 976	11 764	17 330	29 094
1964-65	44 872	20 922	21 118	42 040	20 060	17 684	37 744	12 628	20 738	33 366
1965-66	48 870	19 200	24 589	43 789	19 010	20 670	39 680	12 761	24 651	37 412
1966-67	53 593	25 869	36 208	62 070	23 230	24 986	48 218	15 394	35 875	51 269
1967-68	72 021	29 791	33 359	63 153	30 078	31 805	61 881	15 095	37 411	52 504
1968-69	52 291	28 011	28 191	56 202	28 142	28 807	56 947	14 634	37 262	51 896
1969-70	59 534	32 326	29 805	62 131	32 170	34 282	66 452	14 675	36 347	51 022
1970-71	67 991	32 233	37 956	70 189	29 275	30 409	59 684	17 906	45 559	63 465
1971-72	70 083	32 219	32 100	64 319	31 699	38 018	69 717	19 262	42 374	61 636
1972-73	90 421	43 328	47 279	90 607	36 190	41 915	78 105	27 418	49 104	76 522
1973-74 (a)	100 719	58 098	49 027	107 125	48 606	40 340	88 946	38 636	58 727	97 363
1974-75	112 736	60 513	52 667	113 180	58 824	40 669	99 493	42 799	73 520	116 319
1975-76	160 390	96 465	60 376	156 840	78 814	66 295	145 109	65 774	74 721	140 494
1976-77	200 562	103 068	75 506	178 574	105 160	69 402	174 563	68 981	84 693	153 674
1977-78	187 729	100 600	91 655	192 255	109 953	83 067	193 019	62 976	98 337	161 316

(a) Alterations and additions to dwellings valued at \$10 000 and over are included with the value of dwellings up to 1972-73 but excluded thereafter; from 1973-74 the value of alterations and additions to dwellings valued at \$10 000 and over is included with 'other building'.

(Chapter 13)

New Houses Completed and Value of Work Done on New Houses and Other New Buildings

Year	New houses completed according to material of outer walls (a)						Value of work done on—	
	Brick, concrete, etc. solid and veneer		Wood (weatherboard, etc.)		Asbestos-cement and other materials		Total new houses	Other new building
	Number	Value (\$'000)	Number	Value (\$'000)	Number	Value (\$'000)	Number (\$'000)	Value (\$'000)
1946-47	296	824	756	1 420	18	30	1 070	2 274
1947-48	373	1 180	1 127	2 228	44	74	1 544	3 482
1948-49	534	1 954	1 606	3 800	147	230	2 287	5 984
1949-50	722	2 906	1 955	5 140	175	324	2 852	8 370
1950-51	959	4 488	2 741	8 520	214	444	3 914	13 452
1951-52	982	5 380	2 697	10 042	320	912	3 999	16 334
1952-53	876	5 350	2 189	9 012	249	818	3 314	15 180
1953-54	632	4 342	1 879	8 730	119	382	2 630	13 454
1954-55	515	3 452	1 898	9 152	67	220	2 480	12 824
1955-56	685	4 756	1 934	9 724	102	302	2 721	14 782
1956-57	703	5 066	1 975	10 384	81	264	2 759	15 714
1957-58	583	4 534	1 891	10 800	92	256	2 566	15 590
1958-59	674	5 132	1 807	9 856	96	310	2 577	15 126
1959-60	814	6 406	1 582	8 814	79	240	2 475	15 290
1960-61	845	6 772	1 562	9 232	80	250	2 487	16 254
1961-62	910	7 404	1 413	8 096	74	218	2 397	15 718
1962-63	1 006	8 016	1 426	8 252	72	216	2 504	16 484
1963-64	1 098	9 116	1 337	7 956	76	260	2 511	17 332
1964-65	1 352	11 746	1 142	7 158	85	312	2 579	19 216
1965-66	1 254	11 491	932	6 033	74	282	2 260	17 806
1966-67	1 326	12 635	1 073	6 987	366	2 443	2 765	22 065
1967-68	1 724	17 324	1 395	9 646	212	1 334	3 331	28 573
1968-69	1 724	18 345	755	5 365	225	1 813	2 704	25 523
1969-70	1 892	20 756	577	4 071	392	3 457	2 861	28 283
1970-71	1 711	19 848	350	2 978	202	1 633	2 263	24 459
1971-72	1 781	22 007	196	1 615	284	2 545	2 261	26 165
1972-73	2 018	26 800	204	1 705	162	1 143	2 384	29 648
1973-74 (a)	2 505	39 290	157	1 510	157	1 157	2 819	41 957
1974-75	2 327	45 440	116	1 471	207	1 863	2 650	48 775
1975-76	2 440	58 143	112	1 807	252	3 321	2 804	63 272
1976-77	2 635	74 912	148	2 894	354	7 071	3 137	84 877
1977-78	2 420	75 245	214	4 159	199	3 150	2 833	82 565

(a) Alterations and additions to houses valued at \$10 000 and over are included with the number and value of dwellings up to 1972-73 but excluded thereafter; from 1973-74, alterations and additions to houses valued at \$10 000 and over are included in 'other building'.

(Chapter 14)

Education: Post Secondary and Tertiary

Year	Technical colleges			Colleges of Advanced Education		University	
	Number of colleges	Teaching staff	Students aggregate enrolment	Teaching staff full-time	Students	Teaching staff full-time	Total students enrolled
1900	1	<i>n.a.</i>	(a) 41	..	..	9	51
1905	4	28	(b) 756	..	..	9	67
1910	4	34	(b) 614	..	..	10	147
1915	5	40	(b) 955	..	..	17	258
1920	4	63	1 152	..	..	23	179
1925	4	64	1 049	..	..	28	173
1930	4	67	950	..	..	29	449
1935	4	83	1 037	..	..	36	229
1940	6	169	2 015	..	..	47	(c) 452
1945	6	206	2 951	..	..	43	503
1950	9	287	5 099	..	..	80	670
1955	(d) 13	(d) 396	(d) 6 151	..	..	(e) 78	783
1960	11	524	7 565	..	..	108	1 332
1961	12	480	6 499	..	..	110	1 460
1962	11	502	6 946	..	..	120	1 572
1963	(f) 10	(f) 539	(f) 7 587	<i>n.a.</i>	<i>n.a.</i>	127	1 691
1964	9	590	7 692	<i>n.a.</i>	<i>n.a.</i>	131	1 863
1965	12	588	7 916	<i>n.a.</i>	<i>n.a.</i>	145	2 083
1966	11	745	7 962	<i>n.a.</i>	<i>n.a.</i>	163	2 346
1967	10	787	8 200	<i>n.a.</i>	<i>n.a.</i>	164	2 443
1968	(g) 7	(g) 845	(g) 8 159	52	1 052	169	2 592
1969	7	774	8 125	52	1 121	193	2 830
1970	7	739	8 069	53	1 134	202	3 119
1971	7	754	6 849	62	1 142	220	3 444
1972	7	566	7 234	115	1 811	248	3 371
1973	6	707	7 519	165	2 003	254	3 263
1974	7	911	9 826	184	2 261	270	3 414
1975	9	866	10 254	203	2 435	280	3 399
1976	10	1 070	11 155	206	2 642	294	3 536
1977	<i>n.y.a.</i>	<i>n.y.a.</i>	<i>n.y.a.</i>	<i>n.y.a.</i>	2 586	<i>n.y.a.</i>	3 525

(a) Average quarterly enrolments.

(b) Individual students.

(c) Gross enrolments from 1936 to 1949; individual enrolments thereafter.

(d) Includes schools at which Senior Technical Classes were held.

(e) Excludes part-time teaching staff from 1952.

(f) Includes School of Art from 1963 and Conservatorium of Music from 1964.

(g) Excludes School of Art, Conservatorium of Music and details of advanced education courses conducted at other institutions.

(Chapter 14)

Education: Primary and Secondary

Year	Government schools			Non-government schools		
	Number of schools	Teaching staff	Students (a)	Number of schools	Teaching staff	Students (b)
1900.....	309	(c) 612	24 157	224	n.a.	9 749
1905.....	343	600	24 043	167	n.a.	8 323
1910.....	367	677	30 805	124	420	6 278
1915.....	457	968	35 812	92	322	5 944
1920.....	470	1 102	39 360	84	317	5 872
1925.....	515	1 315	39 910	75	312	6 103
1930.....	508	1 358	40 032	66	326	5 862
1935.....	516	1 282	39 332	65	324	5 794
1940.....	431	1 398	37 369	63	329	6 139
1945.....	356	1 511	35 925	59	321	6 987
1950.....	332	1 687	46 394	58	375	8 330
1955.....	291	2 277	60 779	57	424	10 454
1960.....	287	2 540	65 049	60	544	12 716
1961.....	289	2 479	66 624	66	570	13 435
1962.....	286	(d) 2 771	68 346	66	597	13 673
1963.....	288	2 955	69 633	66	595	14 194
1964.....	293	3 075	70 643	64	635	14 385
1965.....	296	3 243	71 615	64	666	14 688
1965.....	294	3 374	72 461	64	686	14 743
1967.....	297	3 531	74 265	65	695	14 913
1968.....	291	3 571	76 109	68	753	14 974
1969.....	295	3 666	78 339	67	760	14 740
1970.....	283	3 756	79 385	68	810	14 623
1971.....	283	3 796	80 092	68	775	14 415
1972.....	280	3 845	79 957	66	791	14 098
1973 (e).....	280	3 937	79 705	65	684	14 237
1974 (e).....	279	4 099	79 835	65	710	14 407
1975 (e).....	285	4 310	80 917	66	736	14 597
1976 (e).....	284	4 430	81 182	71	739	14 431
1977 (e).....	251	4 511	80 872	62	729	14 446

(a) Aggregate enrolment for whole year prior to 1960. From 1960 as at 1 August and excluding adult correspondence students.

(b) Aggregate enrolment for whole year to 1919. From 1920 to 1961 enrolment as at 31 December and thereafter at 1 August.

(c) Includes teachers, pupil-teachers and paid monitors; excludes training college staff, junior monitors, subsidised teachers, etc.

(d) Includes part-time teachers but excludes teachers at special schools from 1962.

(e) Full-time plus full-time equivalent of part-time teachers.

(Chapter 15)

Commonwealth Social Service Benefits Paid in Tasmania

Year	Child endowment	Maternity allowance		Unemployment benefit		Sickness benefit		Special benefit (a)	
	Total amount paid	Claims admitted	Amount paid	Claims admitted	Amount paid	Claims admitted	Amount paid	Claims admitted	Amount paid
1912-13.....	\$'000	no.	\$'000	no.	\$'000	no.	\$'000	no.	\$'000
1944-45.....	—	3 611	n.a.	—	—	—	—	—	—
1949-50.....	1 057	5 582	n.a.	—	—	—	—	—	—
1954-55.....	2 483	7 408	n.a.	151	4	2 840	74	126	8
1954-55.....	(b) 4 065	7 940	255	471	(c) 32	1 943	(c) 103	106	24
1959-60.....	4 719	8 985	285	3 186	242	1 883	135	130	39
1960-61.....	5 484	9 007	296	3 995	229	1 893	134	102	39
1961-62.....	4 993	8 942	289	8 273	696	2 000	163	93	38
1962-63.....	5 045	8 560	277	7 141	783	2 099	203	111	44
1963-64.....	6 113	8 437	272	6 720	750	2 167	215	135	52
1964-65.....	6 306	7 821	251	5 255	583	2 238	201	122	52
1965-66.....	6 318	7 578	243	2 742	275	2 040	174	122	57
1966-67.....	6 912	7 606	243	3 166	228	2 147	190	160	47
1967-68.....	6 612	7 939	254	3 746	264	1 952	165	99	42
1968-69.....	6 710	8 373	267	3 984	297	2 070	166	403	55
1969-70.....	7 416	8 130	259	3 825	360	2 194	199	429	68
1970-71.....	6 686	8 594	274	4 388	366	2 687	327	388	71
1971-72.....	7 196	8 211	260	8 974	966	2 964	497	418	79
1972-73.....	8 185	7 615	241	12 536	2 095	3 295	792	459	128
1973-74.....	7 212	7 296	230	11 642	3 125	3 975	1 247	574	224
1974-75.....	6 610	7 225	229	22 088	7 746	4 144	1 692	800	443
1975-76.....	7 766	7 210	215	30 930	15 256	5 018	2 409	1 760	811
1976-77.....	31 197	6 729	215	23 981	17 963	4 662	2 380	1 827	979
1977-78.....	n.y.a.	n.y.a.	n.y.a.	27 337	23 398	4 284	2 385	1 792	804

(a) Includes payments to migrants.

(b) Endowment extended to first child from 20 June 1950. Replaced by family allowances from 1 July 1976.

(c) Rates payable were doubled from 22 September 1952.

(Chapter 15)

Commonwealth Pensions: Tasmania

Year	Age and invalid pensions						War pensions (a)		Widows' pensions	
	Number of pensioners		Expenditure on pensions		Weekly rate (b)	Operative from	Number in force	Amount paid	Number in force	Amount paid
	Age	Invalid	Age	Invalid						
	No.	No.	\$'000	\$'000	\$	Date	No.	\$'000	No.	\$'000
1909-10	3 245	—	159	—	1.00	1.7.1909	—	—	—	—
1914-15	4 528	1 349	223	68	1.00	—	—	—	—	—
1919-20	4 806	1 947	364	145	1.50	1.1.1920	9 551	524	—	—
1924-25	5 856	2 036	503	180	1.75	13.9.1923	10 770	590	—	—
1929-30	7 678	2 456	753	248	2.00	8.10.1925	12 321	695	—	—
1934-35	8 495	2 975	737	263	1.75	23.7.1931	12 523	724	—	—
1939-40	10 614	2 552	1 055	256	2.10	26.12.1940	11 729	808	—	—
1944-45	9 512	2 699	1 271	368	2.70	19.8.1943	12 081	1 103	1 564	207
1949-50	11 402	3 158	2 359	670	4.25	21.10.1948	19 168	2 036	1 384	314
1950-51	11 548	2 885	2 819	724	5.00	2.11.1950	21 407	2 595	1 366	323
1951-52	11 716	2 762	3 457	831	6.00	1.11.1951	22 863	3 421	1 358	376
1952-53	12 380	2 602	4 107	879	6.75	2.10.1952	23 966	3 429	1 380	441
1953-54	12 906	2 605	4 358	908	7.00	29.10.1953	24 935	3 641	1 371	461
1954-55	13 679	2 681	4 795	967	7.00	—	25 731	3 934	1 409	475
1955-56	14 074	2 596	5 605	1 063	8.00	27.10.1955	26 483	4 035	1 419	537
1956-57	14 847	2 812	5 887	1 183	8.00	—	26 751	4 054	1 476	607
1957-58	15 114	2 883	6 527	1 315	8.75	24.10.1957	27 238	4 424	1 581	677
1958-59	15 434	3 070	6 660	1 419	8.75	—	27 621	4 458	1 663	741
1959-60	15 835	3 206	7 471	1 605	9.50	8.10.1959	28 048	4 832	1 773	833
1960-61	16 552	3 338	(c) 10 101	—	10.00	6.10.1960	28 305	5 166	1 849	940
1961-62	17 522	3 299	11 404	—	10.50	5.10.1961	28 398	4 988	1 912	1 037
1962-63	17 760	3 343	11 717	—	10.50	—	28 214	5 668	1 977	1 084
1963-64	18 303	3 363	12 343	—	11.50	14.11.1963	27 913	6 158	2 109	1 467
1964-65	18 892	3 532	13 184	—	12.00	1.10.1964	27 109	6 214	2 248	1 699
1965-66	19 181	3 444	13 439	—	12.00	—	26 446	6 919	2 327	1 791
1966-67	19 590	3 530	14 574	—	13.00	13.10.1966	25 629	6 645	2 432	1 988
1967-68	20 411	3 548	15 414	—	13.00	—	25 015	6 790	2 588	2 125
1968-69	21 029	3 819	16 768	—	14.00	10.10.1968	24 485	7 622	2 678	2 465
1969-70	23 915	4 051	19 517	—	15.00	9.10.1969	23 807	7 835	2 958	2 927
1970-71	24 894	4 316	21 835	—	15.50	8.10.1970	—	—	—	—
1971-72	25 668	4 498	25 543	—	16.00	8.4.1971	23 254	8 230	3 138	3 327
1972-73	29 107	4 855	33 656	—	17.25	7.10.1971	—	—	—	—
1973-74	31 904	5 087	35 804	—	18.25	4.5.1972	22 512	9 094	3 205	3 842
1974-75	34 269	5 460	60 118	—	20.00	Aug. 1972	—	—	—	—
1975-76	35 594	6 091	77 976	—	21.50	Mar. 1973	21 905	9 857	3 600	5 136
1976-77	36 954	6 612	91 788	—	23.00	Aug. 1973	—	—	—	—
1977-78	38 337	6 463	107 203	—	26.00	Apr. 1974	21 987	11 176	3 932	6 582
					31.00	Aug. 1974	—	—	—	—
					36.00	Apr. 1975	21 474	13 697	4 103	8 521
					38.75	Aug. 1975	—	—	—	—
					41.25	Apr. 1976	20 778	14 827	4 209	11 221
					43.50	Aug. 1976	—	—	—	—
					47.10	Apr. 1977	20 062	16 637	4 337	12 455
					49.30	Aug. 1977	—	—	—	—
					51.45	May. 1978	18 844	18 676	4 465	14 660

(a) Excludes pensions in respect of the Boer War which are paid by the United Kingdom.

(b) Maximum single rate payable; subject to Means Test.

(c) Separate figures for age and invalid pensions not available from 1960-61.

Appendix A

(Chapter 17)

Employment; Unemployment; Wage Rates and Earnings

Year	Civilian employees at 30 June	Unemployment			Prescribed weekly wage rates, adult males, Hobart at 31 December		Average wage rates and earnings, Tasmania	
		Labour force surveys (a)	Persons registered with C'wealth employment service (b)	Persons receiving unemployment benefits (c)	Basic wage (d)	Minimum wage (e)	Weighted average minimum weekly wage rates, adult males at 31 December (f)	Average weekly earnings per employee male unit at 30 June (g)
	('000)	('000)	no.	no.	\$	\$	\$	\$
1939			..	..	7-70	..	9-22	
1940			..	..	8-10	..	9-61	
1941			..	..	8-50	..	10-35	
1942			..	..	9-20	..	11-17	
1943			..	..	9-50	..	11-58	
1944			..	..	9-40	..	11-53	n.a.
1945			..	..	9-40	..	11-56	
1946			n.a.	83	10-30	..	12-45	
1947			243	44	10-70	..	13-54	
1948			204	28	11-80	..	15-19	
1949			276	32	12-80	..	16-43	16-66
1950			208	32	16-00	..	19-80	19-32
1951			169	10	19-90	..	23-82	23-74
1952			643	104	23-00	..	27-22	29-08
1953	n.a.	n.a.	812	323	24-20	..	28-33	30-86
1954			555	109	24-20	..	28-77	32-78
1955			560	45	24-20	..	29-36	35-86
1956			553	71	25-20	..	31-39	37-80
1957			1 585	410	26-20	..	31-85	39-20
1958			2 231	639	26-70	..	32-36	40-20
1959			2 109	670	28-20	..	34-71	40-30
1960			2 204	500	28-20	..	35-15	44-50
1961			3 213	1 336	29-40	..	36-27	44-70
1962			3 609	1 778	29-40	..	36-48	47-80
1963			3 427	1 777	29-40	..	37-29	48-30
1964			2 968	1 399	31-40	..	39-69	49-90
1965			2 235	926	31-40	..	40-73	52-70
1966	115-4		1 695	433	33-40	..	43-27	(g) 55-20
1967	118-7		2 116	526	34-40	38-15	45-31	60-10
1968	121-8		2 088	635	35-75	40-45	48-98	63-20
1969	124-6	n.a.	2 120	600	36-80	43-00	52-00	67-70
1970	127-8		1 888	437	36-80	43-00	54-49	74-30
1971	125-5		2 682	782	39-00	47-00	60-86	84-80
1972	126-8	3-5	3 498	1 697	41-00	51-70	67-18	92-00
1973	124-2	4-2	3 718	2 330	43-50	60-70	76-80	102-00
1974	133-7	4-4	3 310	1 769	46-00	68-70	106-02	121-10
1975	137-3	6-7	6 190	4 439	50-00	83-50	117-27	151-40
1976	135-0	8-5	8 986	7 228	62-90	102-30	134-14	165-10
1977	137-1	10-2	8 786	7 078	72-40	114-00	147-58	185-50
1978	137-3	11-1	11 944	9 757	77-50	121-90	n.y.a.	201-10

(a) At May each year except for June in 1978.

(b) Persons on register on Friday nearest the end of June who claimed, when registering with the Commonwealth Employment Service, that they were not employed and who were recorded as unplaced. Includes those referred to employers and those who may have obtained employment without notifying the Commonwealth Employment Service and also those receiving unemployment benefit. The Commonwealth Employment Service commenced operating in May 1946. (Source: Department of Labour.)

(c) Persons on benefit on last Saturday of June. Unemployment Benefit was first paid in July, 1945. (Source: Department of Social Security.)

(d) The rates shown up to and including 1966 are those in Commonwealth awards. State Wages Boards awards are shown from 1967. The Commonwealth and State rates prior to 1967 were identical except between 1956 and 1959 when the States rates were slightly higher.

(e) The Tasmanian Wages Boards introduced the concept of the minimum wage in June 1967.

(f) Wage rates used to compile the index are the minimum rates prescribed for particular occupations in Commonwealth or State awards and in registered (and in some cases unregistered) agreements.

(g) Earnings shown from 1967 are not strictly comparable with those for earlier years.

(Chapter 17) **Consumer Price Index Numbers**
(Base of Each Index: Year 1966-67 = 100-0)

Year	Hobart								All groups
	Food	Clothing	Housing	Household equipment and operation	Transportation	Tobacco and alcohol	Health and personal care (a)	Recreation (b)	
1949-50	41.3	56.4	38.2						45.8
1954-55	74.9	84.8	57.9						74.3
1955-56	79.5	85.8	63.7						78.1
1956-57	82.9	88.2	69.7						82.8
1957-58	80.5	90.4	71.8						82.9
1958-59	81.7	91.3	73.8						84.1
1959-60	82.8	92.0	77.6	n.a.	n.a.	n.a.	n.a.	n.a.	85.6
1960-61	92.4	93.5	81.9						90.3
1961-62	90.2	94.7	85.6						90.7
1962-63	88.9	95.2	88.2						90.7
1963-64	90.1	95.7	90.9						91.7
1964-65	94.0	97.0	94.5						94.6
1965-66	98.9	98.0	97.1						98.0
1966-67	100.0	100.0	100.0	100.0	100.0	100.0			100.0
1967-68	106.8	102.4	103.6	103.7	104.2	102.1	n.a.		104.6
1968-69	105.3	104.5	108.4	105.8	108.1	105.0			106.1
1969-70	106.4	107.9	112.6	107.4	111.2	107.3	102.5	n.a.	108.5
1970-71	109.6	111.9	117.4	110.9	116.2	115.6	103.2		112.6
1971-72	112.9	118.5	124.2	119.3	126.6	124.7	119.8		119.9
1972-73	120.0	125.6	131.8	123.8	132.1	134.7	125.8		126.7
1973-74	141.4	142.4	146.9	132.8	139.6	152.7	141.0		142.6
1974-75	158.6	171.8	180.9	156.4	165.3	169.4	174.1		166.7
1975-76	177.5	200.9	216.4	183.9	196.7	206.3	138.5	100.0	190.0
1976-77	201.5	232.5	244.9	201.8	220.7	222.0	250.3	103.6	217.7
1977-78	224.3	257.1	264.6	220.0	241.6	232.2	302.6	110.2	239.1

(a) Base of index: December quarter 1968 = 100.0

(b) Base of index: September quarter 1976 = 100.0

Average Retail Prices (a) of Selected Items of Foodstuffs: Hobart
(Cents)

Year	Bread delivered	Flour (plain)	Tea	Sugar	Jam (plum) (b)	Pota-toes	Butter (fact-ory)	Eggs 1 doz	Bacon rashers	Beef rib without bone	Corned beef (bris-ket) (c)	Mutton (leg) (c)	Mutton chops (loin) (c)	Pork (leg)
	900 g	1 kg	250 g	2 kg	600 g	1 kg	500 g	55 g	250 g	1 kg	1 kg	1 kg	1 kg	1 kg
1901	2.3	2.4	6.8	9.3	4.5	1.4	12.5	10.6	9.3	11.2	9.3	9.0	10.4	11.7
1906	2.4	2.1	6.8	9.3	4.5	2.2	11.6	12.9	7.9	11.7	9.3	9.7	10.6	11.2
1911	2.6	2.8	6.8	9.7	4.7	4.7	12.1	12.1	11.9	11.7	9.3	8.6	10.6	11.2
1916	3.2	3.0	7.9	12.8	5.4	2.1	17.5	14.4	15.5	41.4	16.8	18.1	19.4	21.4
1921	5.4	5.3	9.6	22.0	9.0	1.9	23.7	18.8	19.4	22.0	18.1	17.6	20.1	28.7
1926	4.6	4.3	12.0	16.3	7.8	3.7	21.2	16.2	16.4	20.3	15.7	17.6	20.7	24.0
1931	3.4	2.5	12.8	16.8	7.1	1.9	17.1	12.0	13.0	16.5	13.0	10.8	14.8	17.9
1936	3.7	2.9	12.6	17.9	7.1	2.4	15.0	14.9	11.1	15.0	14.6	15.4	16.8	18.1
1941	4.6	3.7	16.8	17.9	6.4	2.4	18.4	15.9	16.0	19.8	16.5	15.9	17.2	23.1
1946	4.6	4.2	12.5	17.9	7.3	2.2	19.3	20.5	19.3	24.7	20.1	21.2	21.2	26.0
1951	7.8	6.4	21.3	21.2	14.0	7.6	27.9	40.8	21.8	42.3	38.1	42.1	40.1	67.2
1956	12.4	11.0	40.3	36.6	23.6	20.5	51.0	54.1	34.6	73.4	55.6	55.6	43.9	106.3
1957	12.8	11.0	39.1	38.4	26.5	11.1	50.5	54.8	35.4	72.1	52.9	54.0	42.1	104.1
1958	13.2	11.7	38.6	38.4	26.5	9.0	49.7	54.6	34.2	74.7	54.5	52.7	39.0	102.5
1959	13.6	12.0	38.4	38.4	25.8	12.0	50.0	55.0	34.4	79.4	59.3	49.2	33.7	103.8
1960	14.1	13.0	37.8	41.0	25.3	10.9	51.6	55.0	37.7	92.2	73.2	54.9	41.9	118.8
1961	14.5	13.3	38.3	42.3	25.0	20.2	52.4	57.1	39.5	98.3	85.8	56.2	45.9	119.5
1962	14.9	13.4	37.1	42.3	25.0	12.7	52.6	56.1	38.5	89.7	74.5	51.8	39.7	113.1
1963	15.2	13.8	36.5	42.3	24.7	9.3	53.2	57.6	39.5	95.2	76.9	54.7	41.0	123.5
1964	15.3	14.9	36.3	42.1	24.4	14.8	53.9	56.1	42.8	98.8	79.6	58.6	47.6	130.1
1965	15.7	15.0	36.3	41.8	24.1	20.5	54.7	60.2	49.6	111.3	87.3	65.7	55.8	136.5
1966	17.0	16.0	36.5	41.8	24.1	11.3	56.7	63.0	52.7	119.0	94.6	69.2	57.5	140.2
1967	18.0	16.6	36.6	46.0	24.4	15.5	57.3	65.7	54.9	125.9	100.5	71.4	62.2	145.1
1968	19.1	17.9	36.4	49.0	25.0	15.2	57.3	62.2	56.3	122.1	138.9	108.5	111.8	149.5
1969	20.1	18.5	35.2	49.2	25.9	13.4	59.7	68.3	54.6	116.0	135.8	106.3	108.0	147.5
1970	21.3	19.3	33.9	49.0	35.4	14.1	60.6	67.7	55.6	122.6	138.9	197.6	109.3	147.5
1971	23.5	19.2	35.3	48.0	36.8	14.5	62.0	64.4	55.2	127.4	144.4	107.4	107.6	148.8
1972	24.9	19.8	36.7	48.4	38.1	16.3	63.9	67.4	56.9	127.2	149.9	113.3	114.0	151.9
1973	27.0	20.7	35.6	47.9	40.0	20.5	63.9	75.2	57.6	145.3	175.0	148.8	149.3	171.3
1974	31.2	27.3	37.2	48.0	44.9	30.4	67.5	58.8	75.6	153.9	201.3	170.9	174.8	220.0
1975	39.2	32.6	49.7	52.4	52.1	19.6	77.0	93.7	91.9	136.7	180.8	171.5	173.1	256.6
1976	45.1	39.1	53.0	56.7	61.6	33.7	85.2	109.2	111.6	163.1	201.1	197.1	198.2	302.7
1977	49.2	n.a.	92.3	63.5	n.a.	26.6	91.5	123.4	123.0	181.4	218.7	238.9	240.0	326.1

(a) In almost all cases the table units are not necessarily those for which the original price data were obtained. In such cases, prices have been calculated for the table unit.

(b) From 1970 prices shown are for 'Apricot jam, 600 g'.

(c) From 1968 prices shown are for 'Silverside, lamb (leg), lamb chops (loin)', respectively.

Appendix B

METRIC CONVERSION FACTORS

Unit		Conversion factor	
Imperial	Metric	Imperial to metric (multiply imperial by)	Metric to imperial (multiply metric by)
Length			
inch (in)	centimetre (cm)	2.540 00	0.393 701
foot (ft)	metre (m)	0.304 800	3.280 84
yard (yd)	metre (m)	0.914 400	1.093 613
mile	kilometre (km)	1.609 34	0.621 371
nautical mile	kilometre (km)	1.852 00	0.539 957
Area			
square foot (ft ²)	square metre (m ²)	0.092 903 0	10.763 9
square yard (yd ²)	square metre (m ²)	0.836 127	1.195 99
acre (ac)	hectare (ha)	0.404 686	2.471 05
square mile	square kilometre	2.589 99	0.386 102
Mass			
ounce (oz)	gram (g)	28.349 5	0.035 274 0
troy ounce (oz tr)	gram (g)	31.103 5	0.032 150 7
pound (lb)	kilogram (kg)	0.453 592	2.204 62
hundredweight (cwt)	kilogram (kg)	50.802 3	0.019 684 1
short ton (sh ton)	tonne (t)	0.907 185	1.102 31
ton	tonne (t)	1.016 05	0.984 207
Volume			
pint	litre (l)	0.568 261	1.759 75
cubic foot (ft ³)	cubic metre (m ³)	0.028 316 8	35.314 7
cubic yard (yd ³)	cubic metre (m ³)	0.764 555	1.307 95
bushel (bush)	cubic metre (m ³)	0.036 368 7	27.496 1
super foot true	cubic metre (m ³)	0.002 359 74	423.776
super foot hoppus	cubic metre (m ³)	0.003 004 51	332.833
ton measure (40 cubic ft)	cubic metre (m ³)	1.132 67	0.882 868
imperial gallon (gal)	litre (l)	4.546 09	0.219 969
proof gallon (pf gal)	litre alcohol (l al)	2.595 7	0.385 3
Energy			
British thermal unit (Btu)	kilojoule (kJ)	1.055 06	0.947 813
Power			
horsepower (hp)	kilowatt (kW)	0.745 700	1.341 02
Temperature			
degree Fahrenheit (°F)	degree Celsius (°C)	$^{\circ}\text{C} = \frac{5}{9} (^{\circ}\text{F} - 32)$	$^{\circ}\text{F} = \frac{9 \times ^{\circ}\text{C}}{5} + 32$

NOTE: 1 hectare (ha) = 10 000 square metres (m²)
 1 square kilometre (sq km) = 100 hectares (ha)
 1 tonne (t) = 1 000 kilograms (kg)
 1 litre (l) = 1 000 cubic centimetres (cc) = 1 000 millilitres (ml)
 1 cubic metre (m³) = 1 000 litres (l)

Appendix C

CHRONOLOGY: THE YEAR 1978

January

Investigator Coal Exploration Pty Ltd was granted a six-month coal exploration licence in an area south of Fingal. A large scale drug operation involving the smuggling of cannabis oil to Tasmania from Thailand was uncovered by narcotics agents. Hobart City Council announced a land use study as part of the proposed Hobart Strategy Plan. Former Tasmanian, Mr Ralph Harry, appointed as Australian Ambassador to the United Nations. Direct flights between Tasmania and Sydney introduced on a trial basis. The Premier, Mr Lowe, called an urgent meeting of State and Commonwealth Labour Ministers to discuss the unemployment situation. 34 students and three adults caught in a blizzard on Cradle Mountain were brought out safely but four were admitted to hospital suffering from slight exposure. 1 800 people were stranded in Devonport after an electrical fire on board the *Empress of Australia*. The ship was out of action for one week. Detailed plans for a second Hobart bridge were made public. State Government set up a Task Force to halt unnecessary State Government spending. Mr Bill Neilson replaced Mr Royce Neville as Agent-General in London. Sir Stanley Burbury was reappointed for a additional three-year term as Governor. Professor Peter Wilenski was appointed head of inquiry into the State Public Service. 'Clean Heels' won the Hobart Cup. The Shell Company of Australia was granted a licence to explore for coal in North-East Tasmania. The Risdon punt taken out of service.

February

Banks agreed to cut housing loan interest rates by 0.5 per cent. Japanese squid fishing ship, *Eibyn Maru No. 71* was arrested off the East Coast of Tasmania for fishing within 19 kilometres (12 miles) of the coast and escorted to Devonport. In cricket, Tasmania was beaten by Western Australia in the Gillette Cup final. Plans for a \$20 m expansion of the Alanvale College, Launceston were announced. Unemployment in Tasmania reached a post-war peak of 7.3 per cent (Commonwealth Employment Service figures) and 7.5 per cent (Australian Bureau of Statistics figures). Burnie's Lactos cheese factory recommenced production after being destroyed by fire during previous year. West Coast Tin Mine, Minops Pty Ltd, closed its mine. Temco created more than 50 new jobs at its ferro-alloy plant at Bell Bay following big overseas orders for ferro-manganese and silicon-manganese. The ocean-liner *Queen Elizabeth 2* arrived in Hobart for her first port of call on her maiden voyage to Australia. Fire caused \$2m damage to a sawmill at Tonganah. The Tasmanian Trades and Labour Council voted in favour of honouring existing uranium contracts, tipping the balance in the A.C.T.U. vote on the issue thus determining A.C.T.U. policy. State Government refused to allow mining at Precipitous Bluff.

March

Tasman Limited service was reduced from six to three days per week. It was to run on Tuesdays, Thursdays and Fridays. The Tasmanian Railways came under full and administrative control of the Australian National Railways Commission. The Arbitration Commission granted a plateau indexation rise of 1.5 per cent to a level of \$170 per week, and those earning more than \$170 per week received a flat \$2.60 per week. A \$5m-\$6m expansion program at the Goliath Portland Cement Co. Ltd was proposed. A major review by the H.E.C. of Tasmania's potential energy resources was announced. The review was to consider the energy potential of water, coal, gas, wind, sun and liquid fuel from sugar beet and wood. A proposed joint Australian-Soviet fishing venture could lead to the establishment of a new processing factory on Tasmania's West Coast. 21 white collar workers retrenched from the Electrolytic Zinc works in a move to cut costs and remedy a \$3 747 000 operating loss.

Dunlop announced the scrapping of 300 jobs at the Universal Textiles plant at Derwent Park. Metric regulations introduced to make it impermissible to use imperial units. The Tasmanian Government negotiated with Universal Textiles in order to save 300 jobs. The *State Government Gazette* and other Government papers were not published by the Government Printer because of a black ban imposed by members of the Printing and Kindred Industries Union over working hours. The ban lasted for ten days. Negotiations aimed at producing natural gas from the Pelican Field (80 kilometres north of Burnie) began which could mean the supply of natural gas to Tasmania and Victoria. Details of IPEC's proposed 'Tiger' cargo service across Bass Strait released.

April

360 production workers employed by Savage River Mines stood down as a result of a strike by members of the Amalgamated Metal Workers and Shipwrights Union. The Minister for Housing and Construction, Mr Chisholm, unveiled plans for the radical reshaping of inner Launceston. The plan involved the construction of a State Government office complex and an extensively landscaped pedestrian plaza. The State Government failed to save the majority of jobs at the Universal Textiles plant. 200 of the 540 jobs at the plant were to be maintained. Impact study into the effects of all forms of gambling announced by the State Government, before consideration of a northern casino licence. A 200-mile fishing zone was adopted by Australia. The State Liberal Party called off its 'pairing arrangement' in Parliament and as a result a Government Minister was recalled from Sydney to take his place in Parliament. 'Archer's Folly', the art gallery at Carrick, was destroyed by fire along with stock and equipment worth \$80 000. \$1m expansion at the Electrona Carbide Industries as a result of new markets in South-East Asia. Mainland industrial disputes reduced sea-freight deliveries to Tasmania by up to 90 per cent. The State Government was asked to guarantee a \$15m loan for the 'Tiger Line' service. After legislation, it was agreed that the State Treasurer could provide \$15m backing, but not until an impact study was completed. It was revealed that a loss of \$17.3m was incurred by public rail, shipping and ferry services during the 1976-77 financial year.

May

The Federal branch of the Seaman's Union imposed a black ban on the first consignment of red granite from Coles Bay to Taiwan. Hobart's gas mains closed and consumers were changed over to low-pressure gas. An earth tremor, centered in Bass Strait, shook coastal centres from Penguin to Boat Harbour. It recorded 4.5 on the open ended Richter Scale. Proposal for a new \$28m Claremont Community College announced. Ceilings imposed on the State Government work force required zero growth for the rest of the 1977-78 financial year and a one per cent growth rate in 1978-79. The son of the U.S. President, Chip Carter, and his wife had a 20-hour stop-over in Hobart. Sir Robert Menzies died at the age of 83. The Transport Commission sold the ship *Joseph Banks* to the Papua and New Guinea Shipping Corporation for \$260 000 which is \$40 000 less than it was bought for in 1968. The Bruny Island ferry *Melba* was put up for sale. State Government attacked over its inaction to head off the decline in the Tasmanian timber industry in which 1 400 workers had been retrenched over past 18 months. A \$2.4m expansion at A.P.P.M.'s Wesley Vale Mill announced. Announced that self-help drive by Mt Lyell Mines had cut subsidy requirement in half. The new \$4.6m Pieman River Railway Bridge and railway deviation handed over to Emu Bay Railway Company by the H.E.C. The film 'The Last Tasmanian' made considerable impact overseas. A group of unions threatened to actively oppose any politician who backed the proposed 'Tiger Line' shipping service. Unemployment in Tasmania at 6.8 per cent of the workforce.

June

The day before he was knighted, Senator Reg Wright announced his retirement from the Australian Liberal Party in protest at increased Parliamentary superannuation benefits. There were widespread floods in the Fingal Valley and at Longford. The Full Bench of the Arbitration Commission handed down a national wage rise of 1.3 per cent which was a full flow-on from the March quarter C.P.I. figure. A prototype car powered by a hydrogen internal combustion engine was unveiled by the H.E.C. The Stanley Works Pty Ltd

announced an expansion program which will create about 250 new jobs during the next five years. A.P.P.M. announced increased production at its Burnie mill following an upturn in demand which created approximately 80 new jobs. Tasmanian Education Next Decade (TEND) Report recommended that the School Certificate should be scrapped and the Higher School Certificate overhauled. Alderman Doug Plaister was returned as Lord Mayor of Hobart. Tasmanian and Federal politicians were granted wage rises of between \$39 and \$91 per week. The State Government announced rises in taxes and charges as a result of the Premiers' Conference. The possibility of a State income tax was discounted. The Premier, Mr Lowe, cut short his overseas trip due to the outcome of the Premiers' Conference. Cuts of up to \$11m announced by the State Government to fit in with the financial restraints imposed by the Federal Government. The State Government decided not to back the 'Tiger Line' fast-freight project with a \$15m guarantee. The State budget deficit for 1977-78 was \$6.4m. The annual change in the C.P.I. for Australia dropped below eight per cent for the first time in six years. Hobart recorded a 2.0 per cent increase in the C.P.I. for the June quarter.

July

Widespread snowfalls disrupted West Coast mail services, isolated Strathgordon and forced the closure of several highways and main roads. The State Government agreed to pay \$27m to increase pensions for State Parliamentarians. The State Government announced its plan to establish a chair of Transport Economics at the University of Tasmania. The Australian National Railways Commission announced that all regular passenger train services in Tasmania would cease at the end of July. Joint effort by Labor and Liberal politicians to save the Tasman Limited failed. Increased domestic air fares announced: Hobart-Melbourne fare increased by 7.1 per cent and; Launceston, Devonport and Wynard-Melbourne fare increased by 7.6 per cent. The *Empress of Australia* ran aground at Devonport, twenty minutes before it was due to dock. No damage was caused to the ship. In a Cabinet reshuffle: Mr Lohrey lost the Resources and Energy portfolio but gained National Parks and Wildlife; Mr Polley lost National Parks and Wildlife but gained the Mines portfolio; Mr Lowe took over responsibility for the H.E.C.; Mr Batt gained Forestry; and Mr Baldock took over the Town and Country Planning Commission. A 5 cents per litre petrol tax was proposed to replace all other existing motor vehicle taxes and charges but this idea was later dropped after an increased fuel tax was announced in the Federal Budget. Devonport Council approved the construction of a pedestrian mall in Rooke Street. The Federal Government gave the go-ahead for the new \$8m Antarctic base at Kingston. A major study of the State's coal reserves, by the Mines Department, revealed a massive potential deposit amounting to 251 million tonnes in the Fingal Valley.

August

Mr Neil Batt was elected Federal President of the A.L.P. but the State Opposition party said it would not give him a 'pair' when he attended to the duties of this position. The Federal and State Governments gave the go-ahead for a joint Japanese-Tasmanian fishing feasibility project off the State's coastline. The Commonwealth Games were held in Edmonton, Canada. The long-promised Hansard service for State Parliament was axed in the State Budget as part of a cost-cutting program. The Federal Budget increased personal income tax by 1.5 cents in the dollar; Standard Medibank was abolished; petrol, beer, spirits and cigarette taxes were increased; a means test for pension increases for those 70 years of age or older introduced; automatic dole indexation to apply only to those with dependants; family allowance means test on a child's income introduced (this was later eased); maternity allowances were abolished; air navigation charges were raised by 15 per cent; and a \$10 departure tax for all adults (including visitors) leaving Australia was introduced. Sales tax on cars and station wagons was reduced from 27.5 per cent to 15 per cent. The Federal Government confirmed its plans to proceed with the Australian Maritime College at Beauty Point. Coats Patons retrenched 50 employees. Bizjets, the air shuttle service between Smithton and Essendon (Victoria), commenced operation. Two miners were killed in an underground rockfall at King Island Scheelite Ltd's Dolphin Mine at Grassy. Johns Phoenix retrenched 59 workers from its fabrication division. The Federal and State Governments agreed to pay up to \$7.6m to keep the Mt Lyell copper mine in operation until mid 1980.

September

The 'stand-by' air fare experiment began. A nine-man Private Forestry Council was appointed to serve as an advisory body to the Forestry Commission on all matters relating to private forestry. The State Treasurer, Mr Batt, brought down the State Budget: power charges, stamp duty and mining royalties were all increased; death tax and land tax were lowered; and no-fault insurance premiums on the average motor vehicle were reduced by \$5. The Arbitration Commission replaced quarterly national wage case hearings with six-monthly hearings which will be held in October and April of each year. The Cartland Committee of Inquiry into South-West Tasmania proposed that an authority be set up to advise the Government on all future land-use in that part of the State. The 1979 Military Tattoo was cancelled because the State Government was not prepared to increase assistance beyond \$25 000. In Australian Rules football, Sandy Bay won the T.F.L. Premiership; North Launceston won the N.T.F.A. Premiership; and Coee won the N.W.F.U. and State Premierships. A survey revealed that the introduction of fluoride into Tasmanian water supplies cut the rate of dental decay amongst school children by more than half. The Victimless Crime Select Committee recommended legalisation of homosexuality and relaxation of marihuana smoking laws. Renison Ltd announced a \$20m expansion programme at its West Coast plant as a result of increased world demand for tin. Hobart's C.P.I. for the September quarter rose 1.5 per cent compared to 1.9 per cent for the six state capitals.

October

Gale-force winds swept bushfires across Hobart's southern suburbs, destroying two homes. M.T.T. bus drivers around the State went out on strike protesting against a rejection of pay claims. Investigation began into allegations that the Tasmanian Freight Equalisation Scheme was being defrauded of up to \$100 000. Hobart's Elizabeth Mall was officially opened. Tasmania lost its Military Tattoo to Victoria where the Government offered to provide a \$70 000 guarantee. The Tasmanian construction company, Watts Construction Pty Ltd, won the \$7m contract for the construction of the Antarctic Research Base at Kingston. The T.C.A.E. (Mt Nelson campus) and the Hope Foundation were granted special 'F.M.' broadcast licences. An official inquiry into the administration and patient care of the Mersey General Hospital was ordered by the State Minister for Health following the death of a four-year-old boy at the hospital. Sue Hickey was crowned Miss Tasmania 1979. The State Government approved a scheme to research and plan Tasmania's energy policy. This was intended to reduce the autonomy of the H.E.C. by bringing it under direct ministerial control and to broaden its role to cover all energy sources. Shell announced a \$3m exploration project for coal on Tasmania's East Coast. A meeting of 350 George Town rate-payers called for the resignation of members of the George Town Municipal Council after demanding that rate increases be lowered from 18 to 12 per cent. A national alert went out after the discovery of contaminated canned salmon and fish cutlets from Safcol's Margate plant. The canning operations of the plant were suspended and the C.S.I.R.O. was called in to make a detailed investigation. Safcol issued a writ against J. Gadsden Pty Ltd who supply cans to the plant. State Cabinet accepted a recommendation that the Federal Hotels consortium be granted the Northern Licence to build the State's second casino. It was announced that construction of the \$7m country-club style casino could start in early 1979 at Mt Leslie in Prospect Vale.

November

Tasmania obtained approval from the Loans Council to borrow \$110m to finance State Government works throughout the State. The Tasmanian Government Insurance Office announced its withdrawal from medical and hospital insurance coverage. It was announced that a new 'fire tax' levied on dwellings would be introduced instead of payment as part of insurance premiums. The Federal Government agreed with the Tasmanian Government on the establishment of a trial Tasmania-New Zealand air link. The State Government announced drastic reductions in the Wesley Vale Timber Concession areas which would take effect from 1 December 1980. A lethal cloud of sulphur dioxide, accidentally released from the Electrolytic Zinc Company, loomed over some of Hobart's northern suburbs before dispersal by favourable breezes. Improved World copper prices have helped to put the Mt Lyell Mining Company back on the road to a sound recovery. Mr Charles Cox was appointed to inquire

into the operations of the Mersey General Hospital at Latrobe. A Federal Cabinet reshuffle resulted in increased responsibilities for Tasmania's two Federal Ministers, Mr Groom and Mr Newman.

December

A new 78-bed motel opened at Strahan. Plans were announced for extensions to the Eastlands shopping complex to accommodate a new store for G.P. Fitzgerald and Co. A Government appointed expert found that proper care and skill were not exercised in the design, selection, installation and supervision of the boiler plant at St. John's Park geriatric hospital. A barrister was appointed to determine blame. Resident doctors at the Royal Hobart Hospital were granted pay increases of up to \$22 000 per year after the Health Services Department had failed to challenge their wage demands. Savage River Mines announced that it would double the area and the life expectancy of its open cut operations. The mine was expected to be viable for 25 years. Tasmania won the semi-final of the Gillette Cup in Brisbane, the winning runs being hit off the second last ball of the game. The first, half-yearly National Wage Case decision was a full 4.0 per cent flow-on. The State Government acted to bring the Potato Industry Authority under ministerial control. Most of Australia's domestic air services were brought to a standstill because of a strike by airport-ground staff. The Hobart-Melbourne air link was kept open by Hobart members of the Transport Workers Union. A 4 600-hectare wildlife sanctuary on the Tamar and North Esk Rivers was proclaimed by the Minister for National Parks and Wildlife. State Cabinet approved the spending of \$3.1m on employment creating initiatives. The State Government officially handed over 13.25 hectares of land at Newnham to the Commonwealth Government for the Australian Maritime College. Johns Phoenix fabrication plant in Launceston closed after 124 years of operation. Of the 73 workers at the plant, 53 were retrenched and 20 were transferred to Johns Perry plants. The road toll for 1978 was 106, six fewer than 1977. Yachting: Queenscliff-Devonport race—line and handicap honours to *Damel* (Vic.); Melbourne-Hobart 'Westcoaster'—line honours to *Sandra* (Tas.) and handicap honours to *Hot Prospect* (Vic.); and in the Sydney-Hobart Classic, *Apollo* took line honours but *Love and War* took handicap honours. The first 'Tasmanian Fiesta' got off to a successful start. Unemployment in Tasmania at the end of December was 7.1 per cent of the total labour force (C.E.S. figures). Hobart's Consumer Price Index showed a 2.1 per cent increase for the December quarter. This was 6.9 per cent higher than the December quarter 1977 figure.

PUBLICATION OF TASMANIAN STATISTICS

HOW TO OBTAIN CURRENT PUBLICATIONS

General

The Tasmanian Office of the Australian Bureau of Statistics is located in the *Commonwealth Government Centre* at 188 Collins St., Hobart. Requests for statistical publications can be made by calling at this address; by phoning the Information Officer on Hobart 20 4495; or by writing to the *Deputy Commonwealth Statistician*, G.P.O. Box 66A, Hobart 7001.

Service to the public is not restricted to the distribution of publications. If no publication adequately covers the subject matter of the inquiry, then a special extraction of the data required may be undertaken if they are readily available from the basic records held in the office. The guide, *Catalogue of Publications 1977, Tasmanian Office*, includes descriptions of all Tasmanian Office publications together with a detailed subject index and is available free of charge.

Historical

Before the appointment of the first Government Statistician in Tasmania in 1867, statistics had been published in the official 'Blue Books' compiled by the Colonial Secretary during the period 1822-1855, and in volumes entitled *Statistics of Tasmania* after self-government was granted.

By the *Commonwealth and State Statistical Agreement Act 1924*, the Tasmanian Parliament ratified an agreement for the establishment of an office in Tasmania of the Australian Bureau of Statistics, such office to meet the statistical needs of the State Government; provision was made for the Deputy Commonwealth Statistician, a Federal Government officer, to hold, at the discretion of the State Government, the title of (State) Government Statistician. The first officer appointed in this way was L. F. Giblin, M.C., D.S.O., who had previously been the State Government Statistician. (It was not until the late 1950s that similar arrangements were made in the other Australian states.)

Statistics from 1804

In the Archives Office of Tasmania, the following series are available:

- (i) *Statistical Account of Van Diemen's Land or Tasmania, 1804 to 1854* compiled by Hugh M. Hull (Office of the Colonial Secretary).
- (ii) Official 'Blue Books' for the period 1822-1855.
- (iii) *Statistics of Tasmania*—annual publications from 1856 to 1922-23.
- (iv) *Statistics of the State of Tasmania*—annual publications commencing 1923-24 and continuing to 1967-68. (Copies of these volumes are held at the University Library, the State Library in Hobart, the Public Library in Launceston and the Tasmanian Office of the Australian Bureau of Statistics.) Although the bound volume entitled *Statistics of the State of Tasmania* has been discontinued as from the 1967-68 issue, the component parts are still published as separate bulletins.

Copies of publications listed under (i), (iii) and (iv) above, are available for inspection at the Tasmanian Office of the Bureau.

Current Publications of the Tasmanian Office

The Tasmanian Office of the Australian Bureau of Statistics is engaged in a continuous publication program, the statistics appearing in either 'for sale' or 'not for sale' publications.

The 'not for sale' publications (publications available free of charge) can be further dissected into annual bulletins and press releases. The press releases are issued with a view to making the statistical information available as soon as possible after compilation. Bulletins contain greater detail than press releases, but because of time taken to compile and print are issued some time after the period to which they refer. The two principal 'for sale' publications issued by the Tasmanian Office of the Bureau are the *Tasmanian Year Book* and *Pocket Year Book of Tasmania*.

Each issue of the *Monthly Summary of Statistics* includes a table listing all publications produced by the Tasmanian Office, together with details relating to the latest available issues and their dates of publication. The following table lists all recent publications issued by the Tasmanian Office:

Publications of the Tasmanian Office of the Australian Bureau of Statistics (a)

Ref No.	Publication
GENERAL PUBLICATIONS	
1 103-6	Catalogue of Publications, Tasmanian Office <i>irr</i>
1 304-6	Compendium of Municipal Statistics <i>irr</i>
1 101-6	Index of Towns, Localities and Standard Area Codes <i>irr</i>
1 303-6	Monthly Summary of Statistics <i>m</i>
1 302-6	Pocket Year Book of Tasmania (\$1-00; \$1-30 posted; 1978 issue) <i>a</i>
1 301-6	Tasmanian Year Book (\$8-00; posted—\$9-00 Tas., \$10-30 interstate; 1979 issue) <i>a</i>
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7 101-6	Agricultural Industry <i>a</i>
8 701-6	Building Industry <i>a</i>
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3 301-6	Death, Causes of <i>a</i>
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8 702-6	Building Approvals <i>m</i>
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9 401-6	Road Traffic Accidents Involving Casualties <i>q</i>
9 402-6	Road Traffic Accidents Involving Casualties $\frac{1}{2}$ -yearly
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8 203-6	Sawmilling, Woodchipping, etc. Statistics <i>m</i>

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8 603-6	Tourist Accommodation Establishments (Occupancy Survey) <i>q</i>
8 604-6	Tourist Accommodation Establishments, Census of <i>irr</i>
5 402-6	Trade, Overseas <i>a</i>
7 205-6	Wool Production Statistics <i>a</i>

(a) Unless a price (excluding postage) is given, the publication is available free of charge (in limited numbers). The symbols used indicate the frequency of publication as follows: *m*—monthly, *q*—quarterly, *a*—annual and *irr*—irregular.

TASMANIAN STATISTICS IN CENTRAL OFFICE PUBLICATIONS

Although publications of the Tasmanian Office of the Australian Bureau of Statistics make available statistics on many aspects of the State, there are some fields in which additional or more frequent information is available in publications of the Central Office.

How to Obtain Central Office Publications

Central Office printed publications may be *bought* direct from the *Australian Government Publications and Inquiry Centres* at 113 *London Circuit, Canberra* or 162 *Macquarie St., Hobart*, or from the Tasmanian Office of the Australian Bureau of Statistics. A standing order may be placed with the *Australian Government Publishing Service, P.O. Box 84, Canberra, A.C.T. 2600*, with whom a credit account may be arranged. In addition to printed publications for which a charge is made, there are other Central Office publications (mimeographed, etc.) which may be obtained free of charge from the Australian Statistician, Canberra (telephone (062) 52 7911).

Subject Matter of Central Office Publications

The fields of statistical inquiry covered in Central Office publications are very wide and the best way to obtain a guide to the material available is to write to: *The Australian Statistician, P.O. Box 10, Belconnen, A.C.T. 2616* and ask for the booklet *Catalogue of Publications*. Copies of this guide are also available at the Tasmanian Office of the Bureau. This free, comprehensive guide lists the publications of the Central Office and of the state offices; in addition, it contains a subject index to information covered by Central Office publications. Readers with interest in a particular field are invited to call at, or write to, the Tasmanian Office which is in a position to give advice on what publications are available.

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